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SECTOR 6 — CHART INFORMATION

SECTOR 6

NORTH AND NORTHWEST SIDES OF SEA OF OKHOTSK—ZALIV SHELIKHOVA TO SAKHALINSKIY ZALIV

Plan.—The coasts described in this sector comprise the N and NW sides of the Sea of Okhotsk from Mys Tolstoy to Mys Aleksandra, including Shantarskiye Ostrova. The arrangement of the sector is from E to W, then from NE to SW.

General Remarks

6.1 Winds—Weather.—On the N shore of the Sea of Okhotsk, gentle winds and calms prevailing throughout April and May and gentle SE winds during June and July are occasionally interrupted by strong winds from the NE through E to SE, but rarely last for longer than two successive days. Between the middle of August and middle of September, SW winds become prevalent and may attain Force 3 or 4.

The latter half of September, October, and November is a period of protracted storms from the NE, SE, or NW, which are separated by short-lived calms. Fresh winter winds, N and NW being prevalent, prevail throughout December, January, and February, gradually losing their force toward March.

In Shantarskiye Ostrova, from April to the middle of July, is a period of calms and light airs. From the last part of July to September, SW to W dry winds of moderate force prevail and bring clear weather, the month of August being the best month of the navigational season. In September W winds change to NW winter winds and increase in force toward the end of the month. The last part of September, October, and November is a period of NE storms alternating with fresh NW winds.

Winds from the SE, as a rule, are accompanied by fog, and winds from the NNE to E are accompanied by mist and foul weather. Winds from the SSW to SW tend to disperse fog in the W part of this coast, and in the E part when the wind is of sufficient strength. Winds from the N through W to WSW are accompanied by clear weather.

On the NW coast of the Sea of Okhotsk, fog is frequent from the beginning of spring to midsummer. Fog is continuous in summer, and in the vicinity of **Ostrov Iony** (56°24'N., 143°23'E.). The N coast is often marked by fog, except with winds from the W sector. Vessels approaching this coast in fog should take all precautions upon obtaining a depth of 92m or less, or when within 3 miles of the coast in the E part.

During May, June, and July, 80 percent of the days of the month experience fog at the E part of the N shore of the Sea of Okhotsk, about 50 percent of the month is foggy at the mid part, and from 20 to 25 percent of the month experiences fog at the W part of this coast. During this period, clear weather, which is usually accompanied by gentle offshore winds, is rather occasional and short-lived, often being confined to an offshore lane 15 to 20 miles in width. The number of clear days increases markedly toward the fall.

The season of fog in the vicinity of Shantarskiye Ostrova lasts from early spring to the midsummer, the frequency and density of fog being dependent on the amount of ice brought here from the N and NW coasts of the Sea of Okhotsk. In July,

when SW to W dry winds begin to prevail, the number of days with fog decreases markedly.

The coast between Mys Tolstoy and Mys Alevina is fringed by a cold belt of water, 15 to 25 miles wide, in which the surface temperature in the summer is around 2°C, with colder patches near Mys Tolstoy. Farther seaward the temperature at the surface rises sharply to 12°C at the end of the summer.

Between Mys Alevina and Mys Duga, the temperature is approximately 6°C, rising N and S of the area. Approaching Tauyskaya Guba from the S, a vessel will pass through a belt of cold water.

West of Mys Duga, the cold belt becomes narrower and the change of temperature less marked; it ceases to exist S of Okhotskiy Reyd.

Ice.—Ice renders navigation impossible from the end of October or November until July. The N coast is usually free of ice in July, but can be reached in May and June passing through drift ice.

In the vicinity of Shantarskiye Ostrova the first ice is formed in the latter part of October or early November, and usually by the first half of December, solid ice extends into the sea as far as the eye can see. In the spring the ice begins to break up by the end of May or early June, but the drift ice, the amount of which may vary from year to year, remains around the islands, impeding navigation until the latter half of June, more often until July, and occasionally as late as August. Ordinarily, the ice does not interfere with navigation beginning the last part in July, but in some years the islands remain inaccessible throughout the navigational season.

Zaliv Akademii usually clears of ice by the middle of June, but in some years ice may remain in the approaches to the bay after this time. Zaliv Akademii may be temporarily packed with ice, rendering navigation impracticable, in unfavorable years, especially after strong NE winds. These conditions may prevail until as late as mid-August.

Tides—Currents.—The tidal wave advances toward Shantarskiye Ostrova from the ENE, increasing the HW intervals and retarding the SW, as one proceeds W and SW through the islands. The tidal currents range from 2 knots at the NE end of the group to 8 knots in the narrows of the strait between Ostrov Malyy Shantar and Ostrov Belichiy.

A constant current, which sets W along the N shore of the Sea of Okhotsk and attains a velocity of 0.8 knot E of Tauyskaya Guba, gradually loses its velocity and is imperceptible off the W part of this coast.

The flood current sets W, and being combined with the constant current, attains a velocity of 1.5 to 2 knots at springs. The ebb current sets E, and being abated by the constant current, is hardly perceptible or occasionally reversed.

The N coast of the Sea of Okhotsk is generally elevated and steep-to, except for some low sections in the W part and those in the N part of Tauyskaya Guba. A range of mountains extends near and parallel with the NW coast of the Sea of

Okhotsk. The coastal hills begin to recede from the coast N of Mys Nogdan, and the coastline becomes lower, reaching the greatest width in the valleys of Reka Okhota and Reka Kukhtuy.

Mys Tolstoy to Tauyskaya Guba

6.2 Mys Sredniy (59°07'N., 154°52'E.), about 11 miles WSW of Mys Tolstoy, is a light-colored conspicuous cape, which is steep-to and clear of dangers. The coast from the head of the bay N of Mys Sredniy to Mys Chernyy, about 7 miles ENE, then to Mys Tolstoy, consists of steep cliffs with remarkable coloring. Generally, the cliffs W of Mys Chernyy are reddish and striped with yellow and green bands, while the cliffs E are dark gray with red patches.

Tides—Currents.—Tidal currents attain a velocity of 2 to 2.5 knots and cause eddies in the vicinity of Mys Sredniy. The flood current sets W and the ebb sets E.

Zaliv Kekurnyy, entered between Mys Sredniy and Mys Promezhutochnyy, about 16 miles W, has generally high shores. The bay is deep and has nearly steep-to shores. Mys Promezhutochnyy, a dome-shaped cape, is inconspicuous from seaward. Mys Vnutrenniy, about 2.5 miles NE, has two pillar rocks close off its extremity, the outer with a twin summit. Two rocky islets lie about 3.5 miles ENE of Mys Vnutrenniy, and an above-water rock lies about 2.5 miles N of the islets. The area between the islets and the rock has not been sounded, and dangers may exist here.

Mys Babushkina (59°02'N., 154°06'E.), 9 miles WSW of Mys Promezhutochnyy, is formed by the sheer seaward slope of a mountain rising to a height of 790m within the cape. Two rocks lying a short distance off the seaward face of the cape are discernible on NE and NW bearings. The cape blends with the background when seen from S.

6.3 Zaliv Babushkina, a deep bay with steep-to shores, is entered between Mys Babushkina and Mys Yevreinova, about 37 miles WSW. Two rocks, resembling small sailboats, lie near the shore 3.5 miles N of Mys Yevreinova.

The E shore between Mys Babushkina and Zaliv Shkhiperov, 15 miles NW of Mys Babushkina, is backed by an unbroken chain of mountains, with nearly barren slopes marked with picturesque waterfalls. Zaliv Shkhiperov is shallow and inaccessible. The head of the bay is dominated by a mountain, 1,030m high, about 5 miles NW of Zaliv Shkhiperov.

Mys Brat'yev, about 17 miles NE of Mys Yevreinova, has two similar pointed rocks near its extremity, and another pillar rock near the shore, 0.7 mile W of the extremity of the cape. A small inlet, which dries at its head, lies about 2.8 miles N of the cape.

Mys Vostochnyy (58°55'N., 152°45'E.) is a gray cape formed by the slightly convex seaward slope of a detached coastal mountain, rising to a height of 356m immediately inland. A pillar rock and several smaller rocks lie near the extremity of the cape. When seen from W, the entire seaward slope of the mountain forming the cape appears slightly serrated.

6.4 Bukhta Zabiya (Zaliv Zabiya) is entered between Mys Vostochnyy and Mys Kornilova, a high, cliffy,

but inconspicuous cape, about 20 miles W. Mys Pavlovicha, a cape of light gray color, about 7 miles WNW of Mys Vostochnyy, is marked by a group of rocks near its extremity. The shores of the bay are high and rocky. The E shore is steep-to, with depths of 46 to 55m a short distance offshore. The W shore has depths of 37m about 0.5 mile offshore, decreasing abruptly to the shore.

Bukhta Van-der-Shkrufa, at the head of Zaliv Zabiya, is a lagoon-like recess, nearly all of which dries, entered between Mys Lelyakhina and Mys Vkhodnoy, about 0.7 mile ENE. Depths of 11m, fine sand and shell, are in the middle of the entrance into Bukhta Van-der-Shkrufa, and also within a confined area extending about 0.3 mile within this entrance, but they decrease suddenly to depths of 5m farther within the entrance. A rock, awash, lies nearly in the middle of the entrance of Bukhta Van-der-Shkrufa, about 0.2 mile N of the line joining the entrance points. There are other dangerous rocks NE of this rock.

Tides—Currents.—The tidal range is 3m at springs and about 1.5m at neaps. The tidal currents attain a velocity of 2 to 2.5 knots in the vicinity of the anchorage.

The coast between Mys Kornilova and Mys Alevina, about 24 miles W, forms the S side of Poluostrov Koni, and is covered by thick fog during a large part of the summer, especially from April to the end of July.

Aspect.—Mys Bligan, a dark gray cape, indiscernible from the S, rises sheerly from the sea about midway along this coast, and can be identified by a pointed rock lying close offshore. The coast E and W of Mys Bligan is steep-to.

Anchorage.—Anchorage, exposed to S winds, can be obtained in 11m, good holding ground of fine sand, in the middle of the entrance of Bukhta Van-der-Shkrufa.

Mys Alevina (58°50'N., 151°20'E.) is formed by a gray plateau neck of land falling steeply on all sides from heights of about 61m. It is conspicuous from seaward except from the SW. A partly drying reef extends about 0.2 mile SW from the extremity of the cape. A light is exhibited on the cape.

Tides—Currents.—The tidal currents in the vicinity of Mys Alevina attain a velocity of 1.5 to 2 knots. The flood current rounds the cape and sets in a W and a N direction, and the ebb current rounds the cape in a reverse direction.

Tauyskaya Guba

6.5 Tauyskaya Guba, entered between Mys Alevina and Mys Shestakova, a high, steep cape about 78 miles WNW, contains many gulfs, or bays, which offer sheltered anchorage. The important port complex of Nagayeva-Magadan lies in the N part of Tauyskaya Guba.

Ostrov Zav'yalova and Ostrov Spafar'yeva lie in the E and W parts, respectively, of the entrance, and form three entrance channels. The main channel, between the islands, has a width of 43 miles.

There are general depths of 37 to 64m in the bay, decreasing gradually toward the lower shores, but the higher and rocky shores are almost steep-to.

Winds—Weather.—During the navigational season, dense protracted fog prevails in the approaches to Tauyskaya Guba,

and to a somewhat lesser extent in the bay itself. The fog may become thinner, or lift entirely, under the N shore of the bay.

The cold water area in the approach to Tauyskaya Guba is about 35 to 40 miles wide. The N border of this area is somewhat affected by the tidal currents, but on the whole it appears settled along a line extending between the middle points of Ostrov Zav'yalova and Ostrov Spafar'yeva. From early June to the end of September, when the normal temperature of surface water in the Sea of Okhotsk is about 12°C, the temperature of the surface water near Mys Alevina is about 4.4°C, and about 6.7°C in the vicinity of Ostrov Spafar'yeva.

The temperature rises markedly within the entrance of Tauyskaya Guba, the rise being most abrupt in the E entrance channel.

Ice.—Ice begins to form by the middle of October. In winter the shores of the bay are fringed with ice extending 15 to 20 miles offshore. The ice begins to break up during the first half of May, and the bay is clear of ice generally by the middle of June.

Drift ice is found in the channels separating Ostrov Zav'yalova and Ostrov Spafar'yeva from the mainland in December to June. Fast ice forming in the channel between Ostrov Zav'yalova and the mainland is broken up by the currents. Proliv Likhacheva, separating Ostrov Spafar'yeva from the mainland, ordinarily does not freeze.

Tides—Currents.—The tides in Tauyskaya Guba are semidiurnal. The tidal rise is about 4.5m at springs. The tidal rises at neaps are marked with inequality being 1.8 to 2.1m and 0.6 to 0.9m, respectively.

The tidal currents attain maximum velocities of 4.5 to 5 knots at springs and 2 to 2.5 knots at neaps in Proliv Likhacheva, between Ostrov Spafar'yeva and the mainland. These currents lose their velocity gradually within the bay and, being affected by the configuration of the shore, are irregular. The flood current enters the bay from the SE, setting generally E in the E half of the bay, and setting W in the W half of the bay.

The flood tidal current sets N and the ebb S in the channel between Ostrov Zav'yalova and the mainland, attaining a velocity of 1 to 1.5 knots in the S half of the channel, but increasing to 1.5 to 2 knots in the N end of the channel.

Caution.—The approach and entrance into Tauyskaya Guba presents no difficulties in clear weather, but in thick fog it is very difficult. Vessels approaching the bay in fog should attempt to make the E end of Ostrov Spafar'yeva, as the two pointed summits of the island may be readily identified during the temporary and partial clearances, which occur more frequently here than in the vicinity of Ostrov Zav'yalova. The tidal currents must always be taken into consideration.

When approaching from the S, soundings should be taken frequently until it is certain that Ostrov Spafar'yeva has been passed.

It has been reported that a local magnetic anomaly exists in the vicinity of the entrance channels.

6.6 Ostrov Zav'yalova (59°05'N., 150°36'E.) lies in the E side of the entrance. Its summit rises to a height of 1,029m in the N part of the island. A ridge of mountains, 457 to 610m

high, extends from this summit to a peak, 856m high, in the S part of the island.

Mys Yuzhnyy, the SW point of the island, is steep-to and consists of a gray steep cliff with a natural rocky platform at its base. The shores of the island rise sheerly from the sea, and are steep-to, with depths of 20 to 25m a short distance offshore. A short submerged gravel spit, marked by a beacon, extends N from Mys Severnyy, the N extremity of the island.

Ostrov Spafar'yeva (59°12'N., 149°03'E.) lies at the W side of the entrance. It consists of two detached groups of mountains, forming the NE and SW parts, respectively, of the island, and connected to each other by an isthmus. Gora Komandora Beringa, a conspicuous cone-shaped mountain, 579m high, is the summit of the island, and lies on the W side of the NE part of the island. The peak of this mountain is often clearly visible above the low-lying fog and forms a good landmark from the offing.

Gora Lysaya (Gora Lis'ya), the summit of the SW part of the island, rises to a height of 366m, about 3 miles SW of Gora Komandora Beringa. Mys Kaktina, the S extremity of the island, rises to an elevation of 299m. A light is exhibited on the E side of Ostrov Spafar'yeva. A radiobeacon transmits from the light.

Anchorage.—Bukhta Beringa, the bight NW of the low isthmus of Ostrov Spafar'yeva, has depths of 22m in the central part, decreasing gradually to 11m about 0.2 mile from the isthmus. Sheltered anchorage can be obtained in convenient depths, excellent holding ground of mud and sand, in Bukhta Beringa.

Temporary anchorage during winds from the SW and SE quadrants can be obtained in depths of 18 to 37m, fine sand, off the head of the indentation about 2 miles WSW of Mys Ryabokon, the NW extremity of the island.

During W winds, anchorage can be obtained in 26m, fine sand, about 0.3 mile off the E side of the isthmus of the island. This anchorage is exposed to the prevailing summer winds and swell.

6.7 East part of Tauyskaya Guba.—Mys Taran (59°07'N., 151°06'E.), the NW extremity of Poluostrov Koni, lies 19 miles NNW of Mys Alevina. It is the extremity of a sloping, tapering ridge projecting NW from a mountain backing the cape. The point is marked by a light.

A submerged spit, having a width of 1.5 miles under the cape, extends in a general N direction for nearly 1.5 miles from Mys Taran. Near the inner end of this submerged spit the depths are about 4m and increase gradually to 20m at the outer end. Depths of 30 to 40m are found on either side of the spit.

The channel between Ostrov Zav'yalova and Poluostrov Koni is deep and free of dangers, but should not be used during fog, as the fairly even depths do not indicate dangerous proximity to the land.

Zaliv Odyan is entered between Mys Skalistyy, located about 11 miles ENE of Mys Taran, and Mys Beringa, about 12 miles farther NE. A detached 11.2m patch, surrounded by depths of 31 to 35m, lies about 0.4 mile NNW of Mys Skalistyy.

Zaliv Odyan is sheltered from all winds except those from the W. The shores of the bay are high at the entrance and

decrease in height toward the head of the bay, which is low and sandy.

Ostrovok Umara, an islet about 11 miles E of Mys Skalistyy, is separated from the S shore by a narrow and shallow channel.

Mys Beringa is a precipitous cape rising to a height of 424m. Gora Beringa rises to an elevation of 1,062m about 3 miles ENE of the cape.

Winds—Weather.—In Zaliv Odyan fog is not as frequent and dense as elsewhere in Tauyskaya Guba.

Ice.—Zaliv Odyan is icebound throughout the winter, and as a rule, ice remains in this bay for a longer time than in other parts of Tauyskaya Guba.

Tides—Currents.—The tidal currents attain a velocity of 1 to 1.5 knots at the entrance, but diminish gradually and are imperceptible at the head of the bay.

Depths—Limitations.—There are depths of 29 to 32m halfway within the bay, shoaling gradually to 9.1 to 11m about 0.7 mile from the head.

Anchorage.—Bukhta Melkovodnaya, forming the head of Zaliv Odyan, affords anchorage, good holding ground, in 11m, mud, in its outer part. This anchorage is sheltered from the prevailing S and E summer winds. Farther in the bottom is sand and rock. Local knowledge is necessary.

Zaliv Rechnoy is entered between Mys Skala, a high cliffy cape, about 2 miles NNW of Mys Beringa, and Mys Rechnoy, about 4.5 miles farther N. The shore of the bight is cliffy and precipitous in places, and several streams flow into it. There are depths of 26 to 29m, shingle or mud, in the bight up to a distance of 0.5 mile offshore.

Anchorage.—Anchorage, sheltered from E winds, can be obtained in Zaliv Rechnoy.

Mys Kharbiz (59°31'N., 151°31'E.), 8.5 miles NW of Mys Rechnoy, is formed by a high, steep, cliffy slope of a detached coastal elevation, rising to a height of 502m. The light-colored bands of strata forming the cape and a low section of the coast immediately N of it render the cape conspicuous.

Mys Khodil, an elevated cape about 8 miles WNW of Mys Kharbiz, lies on the W side of the mouth of Reka Ola. A spit extends 0.5 mile SE of Mys Khodil. Gora Ambarushka-Tass, about 3 miles NW of Mys Khodil, has a knoll resembling the roof of a shed on its summit. Dve Skaly, a barren pillar rock comprising three parts, 15 to 18m high, stands on the shore about 1 mile W of the elevated part of Mys Khodil. A beacon is situated on Mys Khodil.

The shore extending about 6 miles E of Mys Khodil consists of low islets, or spits, separating an extensive lagoon from the sea. Koshka Itygran, a low spit, extends about 1.3 miles NW from the SE corner of the lagoon.

Ol'skiy Reyd, the roadstead extending from the coast between Mys Khodil and the base of Koshka Itygran, has depths decreasing uniformly from 11m at a distance of 1.5 miles offshore, to 5m about 0.7 mile offshore. A drying shoal extends about 1 mile S from the E entrance to the lagoon.

Winds—Weather.—The warmest month is July with a mean temperature of 14°C. Night frosts begin to occur in September. Reka Ola freezes early in November. The temperature in December is occasionally -4°C. The snow begins to melt by the middle of April.

Anchorage.—Anchorage can be taken 1.5 miles offshore in depths of 10 to 11m. The anchorage is not secure, being open to S winds, which prevail in summer, and the tidal currents set along the N shore of the roadstead and tend to place vessels broadside to the swell, which is not heavy due to the protection of Poluoostrov Koni.

Poluoostrov Staritskogo, with Mys Sredniy (59°26'N., 150°45'E.) at its S extremity, is a mountainous peninsula, rising to a height of 707m. The S side of the peninsula from Mys Ol'skiy, its SE extremity, to Mys Chirikova, about 13 miles WNW, is high, cliffy, and clear of dangers. A light, from which a radiobeacon transmits, stands on the point at position 59°29.1N, 150°30.1E.

Mys Vostochnyy, about 2.5 miles NNE of Mys Ol'skiy, has three pillar rocks in a line extending 0.8 mile ESE. Three islets lie close together about 2 mile ENE of the point. A reef extends 0.4 mile from the islets.

A finger pier, called Veselaya Pier, extends about 215m SSE from the N entrance point of the bight N of Mys Vostochnyy. There are depths of 7 to 7.6m alongside the outer end of the pier.

6.8 West part of Tauyskaya Guba.—Mys Shestakova (59°14'N., 148°55'E.), the W entrance point of Tauyskaya Guba, is a high, cliffy cape, forming the S extremity of Poluoostrov Antamlan, a small elevated peninsula about 457m high, which is the SE part of Poluoostrov Khmitevskogo. A pillar rock near the extremity of Mys Shestakova is fairly conspicuous from S. There are three high rocks close off the point.

Ostrov Talan, about 6 miles NE of Mys Shestakova, rises to a height of 183m and has cliffy shores.

Zaliv Motykleyskiy is entered between **Mys Stanyukovicha** (59°23'N., 148°59'E.) and Mys Onatsevicha, about 9 miles NE. The shores of the bay are high at the entrance, but decrease in height toward the head. A drying reef extends 0.5 mile NNW of Mys Stanyukovicha, and depths of less than 5.5m extend 0.6 mile off the N side of the cape. Mys Onatsevicha is fringed with five rocks, above-water, extending 1 mile E.

Anchorage.—Anchorage can be taken with local knowledge in Zaliv Motykleyskiy, sheltered from all but E winds, in depths of 8 to 16m.

Amakhtonskiy Zaliv is entered between **Mys Amakhtonskiy** (59°31'N., 149°13'E.), the NE extremity of Poluoostrov Onatsevicha, and the mouth of Reka Arman', about 30 miles ENE. A reef extends about 0.7 mile from the N side of Poluoostrov Onatsevicha. Ostrovok Shelikan, an islet 122m high, lies about 5 miles NW of Mys Amakhtonskiy. Tidal currents attain velocities of 2 to 2.5 knots in Amakhtonskiy Zaliv.

Gora Arman Zapadnyy (Gora Arman Vestovyy) (59°49'N., 149°55'E.) is a conspicuous sharp-peaked mountain. Gora Arman Glavnyy (Gora Arman Ostovyy), about 15.5 miles ESE of Gora Arman Zapadnyy, has a cone-shaped summit. On a clear day these mountains form useful landmarks from the offing.

Ostrov Nedorazumeniya (59°35'N., 150°24'E.), an island with its upper part encircled by a number of detached summits

along the shores, has the same height and color as that of the coast in the vicinity, and has the aspect of a peninsula from seaward.

A hill, 271m high, about 0.5 mile N of the S extremity of the island, and another hill, rising to a height of 277m about 0.5 mile farther N and forming the summit of the island, dominate the other elevations of the island. Depths of less than 5.5m extend as far as 0.4 mile off the NW side of the island.

Anchorage.—Anchorage, sheltered from the prevailing SE wind and from swell, can be obtained in depths of 9 to 11m NW of Ostrov Nedorazumeniya. Local knowledge is necessary. Landing on the island is only practicable on the NE part, where there is a low space of sand and gravel covered with grass. A narrow spit extends 0.2 mile N from this low ground.

Bukhta Nagayeva (59°34'N., 150°43'E.)

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6.9 Bukhta Nagayeva, the best sheltered bay in the Sea of Okhotsk, is entered between **Mys Chirikova** (59°29'N., 150°30'E.) and Mys Ostrovnoy, about 4.2 miles N. Nagayeva, on the N shore of the bay, is the commercial port for the industrial center of Magadan at the head of the bay. It is also a naval base.

Winds—Weather.—The elevated shores protect the bay from heavy fog, swell, and from all but WSW and W winds, which occur here rarely, but when they occur they can attain the force of a hurricane.

Ice.—Bukhta Nagayeva freezes by the end of November. The ice may attain a thickness of 0.9m. In the W part of the bay the ice is occasionally broken up for a short time. In the spring the ice breaks up late in May or early June, and the bay clears of ice by the middle of June. Icebreakers and ice reconnaissance aircraft sometimes facilitate entry into the bay in winter.

Tides—Currents.—The MHW interval in Bukhta Nagayeva is 8 hours 13 minutes. The tides are semidiurnal and marked with pronounced inequalities. The maximum and minimum ranges on record are, respectively, 4.2m and 0.6m, respectively. Tidal ranges of 3 to 3.3m occur somewhat closer to springs and are marked by the least inequalities.

The tidal currents at the entrance into Bukhta Nagayeva attain a velocity of 1.5 to 2 knots and cause small eddies in the vicinity of Mys Chirikova. Halfway within the bay the tidal currents have a velocity of 1 knot or less, and they are negligible at the head of the bay.

Depths—Limitations.—The depths are about 35m in the entrance, decreasing gradually to 18.3m about 1 mile from the head of the bay, and finally to 10m about 0.3 mile from the head of the bay.

The commercial port of Nagayeva has a wharf 450m long, with a depth of 11.6m alongside. Close W of the quay, a T-head petroleum pier has a depth of 8.6m at its head.

Aspect.—Mys Chirikova consists of a ridge of hills about 1 mile long in an E-W direction, connected to the rest of Poluostrov Staritskogo by a narrow neck of land. A light is shown a white tower on Mys Chirikova at position 59°29'N, 150°30'E. A hill rises to a height of 235m near the SE end of

the cape. Rocks are scattered to a distance of 135m off the shore of the cape, but depths of 24m have been obtained about 0.1 mile off the S shore of the cape.

A small group of drying rocks, about 1 mile NNE of Mys Chirikova, is marked on the NW side by a lighted buoy.

Pilotage.—Pilotage is compulsory for all foreign vessels. Pilots meet the incoming vessels at the entrance of the bay. Pilots are requested 24 hours in advance from the port captain at Nagayeva.

Anchorage.—Anchorage in suitable depths, sand or stones, occasionally covered with a thin layer of mud, can be obtained in any part of Bukhta Nagayeva. The E part is preferable.

Caution.—Approach and entry into Bukhta Nagayeva presents no difficulty during clear weather, either by day or night. Mys Chirikova can be often identified through a fog of average density, and the N shore of Tauyskaya Guba is often discernible when the fog is light. In rare cases when heavy fog envelops the entire Tauyskaya Guba, it is better not to approach Poluostrov Staritskogo but to steer for a position W of Ostrov Nedorazumeniya, and anchor upon obtaining depths of 28m until the fog clears.

Magnetic anomalies have been observed at the N shore of the Tauyskaya Gulf, from the Nedorazumeniya Isle to the mouth of Ola river, and also in the area of the Zavylov Isle and the W shore of Koni Peninsula. The magnetic declination varies 17° to 10° and 11° to 5°.

Tauyskaya Guba to Okhotskiy Reyd

6.10 Bukhta Shestakova is entered between **Mys Shestakova** (59°14'N., 148°55'E.) and Mys Gavantsa, an elevated cliffy cape rising vertically from the sea about 4.5 miles W. There are depths of 24m in the middle of the bay, and depths of 5.5 to 7.3m about 0.5 mile off the head of the bay. The bottom is sand. A short reef extends from the shore W of the mouth of a stream at the head of the bay.

Anchorage.—Anchorage in suitable depths can be taken in any part of Bukhta Shestakova. During winds from the E through N to W, anchorage in the bay is calm. The bay affords some shelter under the W and E shores during winds from between the SW and W, or SE to E, respectively.

Mys Dal'niy (59°14'N., 148°27'E.), lying 10 miles W of Mys Gavantsa, is high and rocky. A sandy spit extends 0.8 mile W from the point. A rock, lying close offshore, is 3 miles N of Mys Dal'niy.

Zaliv Shel'tinga is entered between Mys Dal'niy and Mys Moskvitina, about 20 miles W. The shores of Zaliv Shel'tinga are high and rocky, except for a sandy beach skirting the NW end of the bay. The high sections of the shore are steep-to, and the bay is clear of dangers. The bottom shelves toward the NW end of the bay, and depths of 11 to 13m, sand, lie about 0.7 mile off the sandy beach.

Anchorage.—Anchorage, sheltered from SW winds, can be taken off the beach in the NW part of the bay. Anchorage in suitable depths can be taken almost anywhere in Zaliv Shel'tinga, but the best anchorage during SE winds is in the light N of the spit extending W from Mys Dal'niy.

Mys Moskvitina, high and cliffy, is the S extremity of Poluostrov Onara. Gora Onara, 1,042m high, lies about 2.5

miles N of Mys Moskvitina. It is very steep on its S and E slopes, and the vertical white stripes on its sides are very conspicuous.

Bukhta Luzhina, W of Poluostrov Onara, has high and rocky shores, and has not been surveyed.

6.11 Mys Rzhavyy (59°24'N., 146°41'E.), lying 28 miles WNW of the W entrance point of Bukhta Luzhina, is a cliffy, steep-to cape with a red color, which stands out against the brown color of the adjacent coasts on either side and is visible from a great distance on a clear day. Gora Ploskaya, 1,373m high and lying about 8 miles E of Mys Rzhavyy, dominates the coast between the cape and Bukhta Luzhina.

Zaliv Ushki is entered between Mys Rzhavyy and Mys Yelagina, 15 miles SW. The shores of the bay are high and cliffy. The head of the bay is formed by a low shore of sand and shingle, about 4.5 miles in width. Depths of about 26m in the N part of the bay decrease gradually to the shores.

Anchorage.—Anchorage can be taken in 11 to 13m, sand, but with rocks and shells in places.

Poluostrov Kamenistyy (59°16'N., 146°20'E.), a narrow peninsula about 15m high, with a flat grassy top, juts out directly E for about 0.5 mile from the coast, 3.5 miles N of Mys Yelagina. The narrow peninsula has low but steep shores, and rocks are scattered on all sides of the peninsula a short distance offshore.

Bukhta Kulku, a rounded recess about 1.7 miles wide at the entrance, lies on the N side of Poluostrov Kamenistyy. Rechka Kulku, a shallow rivulet, discharges at the head of the recess. There are depths of 9m about 0.5 mile off the head of the recess, decreasing rapidly to the shore.

Tides—Currents.—The MHW interval in Bukhta Kulku is 9 hours 30 minutes. Tides are semidiurnal, the tidal rise being up to 2.7m at springs.

Anchorage.—The best anchorage is in a depth of about 12m, poor holding ground, rock, with the E extremity of Poluostrov Kamenistyy bearing 142°, the mouth of Rechka Kulku bearing 255°, and Gora Lisaya bearing 293°. The best landing is close N of the river mouth, where there are no rocks.

Caution.—Vessels approaching Bukhta Kulku from the S should give Poluostrov Kamenistyy a berth of at least 0.5 mile.

Poluostrov Lisianskogo, a mountainous peninsula, has high, steep, and generally steep-to shores. **Gora Ushki** (59°22'N., 146°11'E.), the summit of the peninsula, rises to two pointed peaks. Gora Lisaya, 530m high, about 4 miles SSE of Gora Ushki, can be identified by a round barren summit of gray color, and forms a good landmark.

Mys Duga, the S extremity of the peninsula, terminates in a blunt cape, with Mys Duga Vostochnaya and Mys Duga Zapadnaya as the E and W extremities, respectively, of the cape. Both extremities are fringed by reefs and rocks extending 0.8 mile offshore. A light 34m in height at an elevation of 82m is shown on Mys Duga Vostochnaya.

Mys Ushakova, about 8 miles NW of Mys Duga Zapadnaya, is fringed by foul ground extending about 1.2 miles W.

Eirineiskiy Light (59°14.6'N., 145°49.7'E.) is shown from a 8m tower, at an elevation of 41m on Mys Ushakova.

Caution.—Abnormal magnetic variations exist within an area extending 35 miles WSW from Poluostrov Lisianskogo, and within a circular area with a radius of 30 miles and the center located about 62 miles SSW of the extremity of Poluostrov Lisianskogo.

Guba Yeyrineyskaya is entered between **Mys Shil'kan** (59°22'N., 145°47'E.) and Mys Yeyrineyskiy, 38m high, about 4 miles SSE. Mys Shil'kan has high, dark-gray cliffs, and is formed by the SE slope of a mountain rising to a height of 463m within the cape.

Gora Trekhsopchnaya, rising to a height of 841m about 3.5 miles NNW of Mys Shil'kan, and Gora Ushki, previously described, form good landmarks from the offing. The E and W shores of the gulf are high.

Mys Kekurnyy (59°24'N., 145°52'E.), a cliffy cape about 3 miles NE of Mys Shil'kan and rising to about 475m 1 mile inland, divides the head of the gulf into two recesses. There are depths of about 24m, sand, halfway up the gulf. A bank, with depths of 7.3m, extends about 0.8 mile from the heads of the E and W recesses, and 0.2 to 0.4 mile from the shores of the gulf elsewhere.

Anchorage.—Anchorage, sheltered from all but SW winds, can be obtained in suitable depths, fine sand, within the E recess of Guba Yeyrineyskaya.

6.12 Mys Gereya (59°24'N., 145°41'E.), a high cliffy cape about 3.5 miles NW of Mys Shil'kan, is identified by a conspicuous pointed pillar rock nearby. The cape is steep-to and clear of dangers.

The coast between Mys Kekurnyy and Mys Gadikan, 10.5 miles W, consists of dark-gray cliffs. A landslide of gray color marks the coast about 3.5 miles E of Mys Gadikan.

Mys Gadikan (59°24'N., 145°19'E.) consists of dark, steep cliffs, and is formed by the seaward slope of a hill, 183m high, about 2.5 miles ENE of the cape. The coastal elevations form a ridge extending in a NW direction from the indentation about 2 miles N of the cape, and recede far inland, backing a low section of the coast.

Gora Shil'ki, about 6 miles NE of Mys Gadikan, has twin peaks, 1,739m and 1,510m high, respectively. Gora Verblyud, 1,235m high, is located 2 miles SE of Gora Shil'ki.

A reef projects 0.5 mile SE from the extremity of Mys Gadikan. The vicinity of the cape has not been surveyed, but it appears that the cape is the W limit of that part of the N shore of the Sea of Okhotsk which is steep-to.

A shoal, position doubtful, with a least depth of 3.2m, is charted about 9 miles WSW of Mys Gadikan.

The lagoon of Reka Inya extends 11 miles W and 3 miles E from its E entrance (59°23'N., 144°52'E.). The lagoon is separated from the sea by two low, sand and shingle spits projecting from each end of the lagoon, and two islets which lie between the extremities of the spits and form three entrance channels into the lagoon. The N shore of the lagoon consists of marshy land extending about 3 miles inland.

Inya, a small village, lies on the left bank of Reka Inya.

Gora Derevannay, a mountain rising to a height of 440m, about 9 miles NW of the E entrance of the lagoon and about 5 miles inland, can be identified by a knob on its elongated summit.

Anchorage.—Anchorage abreast the lagoon can be obtained in depths of 9 to 11m, about 1 mile offshore. The anchorage is totally exposed to the sea and to S winds, which prevail in summer.

Reka Ul'beya, a small, shallow river discharges about 2 miles W of the W end of the lagoon of Reka Inya and forms a small lagoon.

Between Reka Ul'beya and Mys Marekan, about 31 miles W, the low coast of sand and shingle is backed by grassy marshland marked with numerous lakes.

Caution.—A submarine cable extends SW from a position 7 miles W of Reka Ul'beya and follows the coast 470 miles to Petrovskaya Kosa.

Gora Vetrennyy Kamushek has a treeless summit resembling a gigantic cap about 6.5 miles WNW of the mouth of Reka Ul'beya. Two bare pointed summits, about 667m and 628m high, rise about 4 miles and 5 miles E, respectively, of Gora Vetrennyy Kamushek.

Gora Volnistaya (59°33'N., 143°56'E.), a conspicuous mountain, can be identified by its wavy slopes. It is 1,939m high.

Mys Marekan (59°19'N., 143°27'E.) is formed by the seaward termination of a mountainous range, and rises to a height of about 454m. From the E and W the mountain range appears to have a fairly uniform height, but from the S, Gora Sosok, rising to its summit on the W side of the range, is conspicuous. A light with a transmitting radiobeacon is exhibited from Mys Marekan.

Okhotskiy Reyd (59°22'N., 143°12'E.)

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6.13 Okhotskiy Reyd is the roadstead at the entrance to Reka Kukhtuy, and consists of the area between the coast and a line joining Mys Marekan and the mouth of Reka Okhota, about 12 miles W. There is always a swell in the roadstead, and a very heavy sea is raised by storms from seaward.

Reka Kukhtuy is entered between Tungusskaya Kosa and Okhotskaya Kosa, and between two coastal shoals projecting S from each of the spits. The position of the channel and its depth change, but the depth on the bar remains unchanged. The entrance channel has an average width of about 90m, and usually is discernible by the comparatively calm water between almost continual breakers on either side. Fishing stakes may be encountered within 1.5 miles of the channel entrance.

The port of **Okhotsk** (59°22'N., 143°12'E.), mainly used by fishing vessels, is situated about 1.5 miles up Reka Kukhtuy, on that part of the S bank formed by the base of Tungusskaya Kosa. A light is exhibited here.

Winds—Weather.—Gentle winds and calms prevail from the end of April to the end of May or early June, when S or SE winds begin to prevail. During June and July, SE winds attain a force not exceeding 3. Storms are rare and short-lived. During August and the first half of September, SW winds prevail and increase in force toward autumn. Fresh winds and storms prevail through the second half of September, October, and November. Winter winds from the N and NW of moderate

force prevail from December to March, toward the end of which these winds gradually subside in force and become gentle.

April, May, and early June is the season of dense protracted fog, often enveloping the sea and the coast for several days at a time. The fog decreases in density and frequency toward autumn.

Ice.—Ice begins to form in mid-November in the vicinity of the port. During the winter, young ice forms on the coast and usually there is floating ice in the approaches before the end of December, and in severe winters by mid-December. Navigation is possible throughout the winter with icebreaker assistance, but no icebreaker is usually assigned for the port which is formally closed for navigation from December 15th to May 15th. However, some ice may remain in the roadstead until early June after a severe winter. During June, blocks of ice may be seen off the roadstead; these have drifted from Penzhinskiy Zaliv, nearly 400 miles E, and are later driven toward the SW shore of the Sea of Okhotsk.

When the rivers break up, the rate of the streams combines to float the ice up to 10 miles clear of the coast, leaving a lane for safe navigation. The ice in the harbor of Okhotsk reaches a maximum thickness of about 1.8m.

Tides—Currents.—The MHW interval at the mouth of Reka Kukhtuy is 10 hours 13 minutes. The tide is semidiurnal, the tidal rise being 3.3m at springs and about 1.5m at neaps.

The flood current sets along the shore in an ENE direction, and the ebb current in a reverse direction, attaining velocities of 1.5 to 2 knots. In the narrows of the entrance into Reka Kukhtuy the flood and the ebb currents are swift and attain respective velocities of 6 and 7 knots at springs.

Depths—Limitations.—Depths of 9.1m lie, on the average, a distance of 1.7 to 1.5 miles offshore in Okhotskiy Reyd. Depths of 3.6m lie a distance of 0.5 to 0.8 miles offshore.

The entrance of Reka Kukhtuy is accessible at HW to vessels with a draft not exceeding 4m. The bar at the middle of the entrance channel has depths of 0.2 to 1.8m (1975), but they are subject to frequent change. Inside the entrance the fairway leads from the bar at the entrance to Reka Kukhtuy, 0.9 mile ENE, with depths of 2 to 4.6m (1975) and then NE for 0.7 mile, with depths of 1.8 to 3.6m (1975) to the quays.

Aspect.—Gora Sosok, previously described, about 6 miles E of the mouth of Reka Kukhtuy, is a useful landmark for vessels approaching from the E.

Gora Ostraya and Gora Ploskaya form useful landmarks for vessels approaching from the S. **Gora Ostraya** (59°15'N., 142°10'E.), about 32 miles WSW of the mouth of Reka Kukhtuy, can be identified by its sharp cone-shaped summit. Gora Ploskaya, about 17 miles N of Gora Ostraya, has a flat summit and is visible for 50 miles on a clear day.

Pilotage.—Pilotage is mandatory. Pilots should be requested 4 hours in advance. Pilots board at the outer anchorage. In conditions of reduced visibility or when the navigational aids are inoperative, the coast radar station, on request from the embarked pilot, will provide radar pilotage advice.

Anchorage.—Anchorage can be taken in suitable depths in any part of the roadstead. A vessel, to be as close as possible to the entrance of Reka Kukhtuy, should anchor in depths of 7m, fine sand, with the entrance of the river bearing 335° distant 1.2 miles, the church situated 1 mile ENE of the river entrance

bearing 024°, and a small hill near the extremity of Mys Marekan bearing 086°.

During strong onshore winds, anchorage should be taken about 0.7 mile farther seaward in a depth of 11m with the mouth of the river bearing 335°.

It should be borne in mind that the tidal currents in Okhotskiy Reyd set parallel to the shore and tend to place anchored vessels broadside to the incoming swell. During storms, these anchorages are untenable and vessels should put to sea.

Caution.—Vessels approaching Okhotskiy Reyd in fog should proceed with caution upon obtaining depths of 30m, and should anchor upon obtaining depths of 18.3m and wait until the fog clears. June and July are the best months of the navigational season.

The approach to Okhotskiy Reyd presents no difficulties in clear weather.

Entrance to Reka Kukhtuy is difficult and should not be attempted if the swell is heavy and causes breakers across the entire entrance channel.

Okhotskiy Reyd to Poluostrov Longdar Negotni

6.14 Reka Okhota (59°20'N., 143°02'E.) discharges about 4 miles WSW of Reka Kukhtuy.

The coast between Reka Kukhtuy and Reka Ul'ya, about 50 miles SW, is low and bordered by a beach of sand and gravel. Rechka Urak flows through a small valley about midway along the stretch. Reka Ul'ya forms a shallow lagoon at its mouth.

Mys Nogdan (58°41'N., 141°41'E.), a conspicuous cape about 12 miles SSW of Reka Ul'ya, is steep-to and rises abruptly to 213m from the low coast on either side. The hills N of the cape begin to recede inland and the beach of sand and gravel becomes wider. A detached pillar lies near the coast about 2.7 miles SSW of the cape.

Mys Nizkiy, about 15 miles SW of Mys Nogdan, is a low, rounded cape projecting about 0.5 mile seaward. A ledge, partly covered at HW, extends 0.5 mile SE of the cape. Mys Ploskiy, about 4 miles WSW of Mys Nizkiy, is a flat-topped section of coast, of medium height, and discernible only by vessels navigating close to the shore.

The coast between Mys Nizkiy and Mys Khanyangda, about 47 miles SSW, consists of a beach of sand and gravel, of variable width, and covered with driftwood. A continuous line of hills backs the beach.

Mys Khanyangda (57°51'N., 140°30'E.) is formed by the seaward slopes of a mountain rising to a height of 423m near the shoreline. A mountain range, trending 3 to 4 miles inland, gives Mys Khanyangda the appearance of a comparatively low cape from the offing. A pillar rock lies near the coastline a short distance S of the cape and equals in height the precipices of the cape.

Mys Enkan, about 8 miles SW of Mys Khanyangda, is bordered S and NW by short reefs. A detached mountain, 323m high, about 1.5 miles N of the cape, has a hill, 213m high, on its S slope, which terminates in precipices 75 to 90m high on its seaward face.

6.15 Mys Odzhan (57°29'N., 139°47'E.), a conspicuous cape lying about 22 miles SW of Mys Enkan, is steep-to, clear

of dangers, and faces the sea with precipices of great height. The cape is formed by the seaward slope of a rounded coastal mountain, about 1 mile N of its extremity.

Ostrovok Nansikan, a cliffy islet about 2.5 miles SE of Mys Odzhan, rises to a 137m summit. A large, pointed pillar rock, connected with the islet by a low isthmus, lies at the NW end of the islet. The shores of the islet are steep-to, and depths of 26m, rocky bottom, lie close offshore.

Tides—Currents.—Tidal currents attain a velocity of 1 to 1.5 knots in the channel separating Ostrovok Nansikan from the mainland. The flood current sets in a SW direction and the ebb current in a reverse direction. The tidal currents here cause eddies which, as a rule, are fairly conspicuous on the lee side of the islet.

Caution.—The sea appears to break NE of the islet, although this area has not been surveyed.

Mys Ugol, about 13 miles SW of Mys Odzhan, rises at the coast line to a prominent peak, 216m high, from a low coast on either side, and is discernible from seaward. Mys Ploskiy, about 3 miles farther SW, is a low cape, the termination of the wooded gentle slope of a mountain rising about 3 miles N of the cape.



Mys Ugol

A coastal mountain, parallel to the coast, about 6 miles WSW of Mys Ploskiy, faces the sea with conspicuous reddish-brown stripes on its steep slopes.

Mys Kamker (57°09'N., 139°04'E.), 15 miles SW of Mys Ploskiy, is the extremity of a peninsula rising to a height of 192m. The E and W sides of the peninsula consist of reddish-brown cliffs about 75m high.

Zaliv Feodota, entered W of Mys Kamker, has sloping sandy shores, fringed by rocks, and backed by rather precipitous cliffs. The depths in the entrance of the bay are 14.5 to 18m, decreasing to 9m about 0.5 mile offshore.

Between the S entrance point of Zaliv Feodota and **Mys Eykan** (57°01'N., 138°55'E.), about 5.5 miles SSW, the coast consists of grayish-brown cliffs of great heights. Coastal elevations exceeding 457m high are located a short distance inland in the vicinity of Mys Eykan.

6.16 Zaliv Feodora, entered 2.5 miles W of Mys Eykan, has a rocky and steep W shore, and low and sandy N and E shores. Kamen' Vneshiyye, a group of above-water rocks, lie in the middle of the entrance and divide the entrance into the E and W channels. The W entrance channel is recommended.

Tides—Currents.—The MHW interval in Zaliv Feodora is approximately 9 hours 30 minutes. The tides are semidiurnal. At springs the maximum rise is 3m. At neaps, the HHW rise is 2.1m and the LHW rise is 0.9m. The highest water occurs on the third or fourth day after the new or the full moon.

Depths—Limitations.—There are depths of 11 to 14m in the entrance of the bay, decreasing to about 9.1m in the central part of the bay. A reef extends about 0.3 mile WNW from the E entrance point, but the W entrance point can be approached to within about 90m.

Anchorage.—Anchorage may be taken in Zaliv Feodota only in case of necessity. Calm anchorage can be obtained in the N recess only with offshore winds from the N through W to WSW. During NE to E winds, the anchorage is exposed to the swell rounding Mys Kamker.

Anchorage in suitable depths, good holding ground of mud, sand, and gravel, can be obtained in Zaliv Feodora. The E part of the bay affords somewhat better protection from the swell rounding Mys Eykan and setting into the bay during NE winds, from which the bay is sheltered.

Poluostrov Nurki is a narrow peninsula, with **Mys Nurki** (56°44'N., 138°33'E.), its S extremity, lying 20 miles SW of Mys Eykan. The S half of the peninsula is formed by the slopes of a conspicuous pointed hill, 207m high, rising steeply from Mys Nurki, then sloping gently N. The N half of the peninsula consists of mostly low, sandy shores, being marked by only one hill, 125m high. The S half of Poluostrov Nurki, even from a short distance offshore, has the appearance of a fairly conspicuous dark island contrasting effectively with the lighter hues of the coast in the background.

Zaliv Aldoma, on the W side of Poluostrov Nurki, offers shelter from NE winds and is possibly the best refuge on the NW shore of the Sea of Okhotsk.

There are depths of 14.6 to 18m in the entrance on the parallel of Mys Nurki, decreasing to 5.5m halfway up the bay. The N part of the bay is shallow.

A drying ledge, which is steep-to, extends in a NW direction for 1 mile from Mys Nurki, the extremity of the ledge being about 0.5 mile offshore. At HW, the ledge is indiscernible when the sea is calm.

6.17 Mal'minskiye Ostrova consists of three small islets and two detached pillar rocks. The largest islet, about 1.5 miles SSW of **Mys Mal'minskiy** (56°42'N., 138°22'E.), rises to a height of 113m. The twin summit of the islet is prominent from the SE. A submerged spit of sand and gravel extends WSW from the islet, and a pillar rock lies about 1 mile W of the islet. A pointed islet, 61m high, and an islet, 46m high, lie 0.5 mile E and 0.5 mile S, respectively, of the largest islet. A pillar rock lies 0.4 mile S of the E islet.

The islets are conspicuous only when the weather is fair, but otherwise are indiscernible from the offing.

Mys Naklonnyy (56°35'N., 138°15'E.), 280m high and lying 8 miles SW of Mys Mal'minskiy, is the extremity of a high, cliffy, and steep projection, which rises to a height of 363m. A small pillar rock lies near the cape.

Between Mys Naklonnyy and Mys L'gotnyy, the NE extremity of Poluostrov Longdar Negotni, about 7 miles S, a rounded open bay is formed. The mountain spurs on the W shore of the bay expose stratification and have the appearance of detached precipices marked with stripes. When the visibility is poor, this unique feature of the shore, if seen, helps in identifying the coast.

Poluostrov Longdar Negotni (56°28'N., 138°11'E.) is a steep-to peninsula connected to the mainland by a low isthmus at the head of Zaliv Ayan. Depths of 37 to 46m, or greater, lie a distance of 0.7 to 1 mile off the seaward face of the peninsula.

Gora Longdar, the summit and highest point on the peninsula, is a conspicuous cone-shaped mountain rising to a height of 631m. The E shore of the peninsula consists of steep cliffs. Mys Vneshniy, the SE extremity of the peninsula, has a detached pillar rock near its extremity. Mys Savaya, about 2 miles W of Mys Vneshniy, consists of grayish-brown precipitous cliffs of considerable height and is steep-to.

Tides—Currents.—In the vicinity of Poluostrov Longdar Negotni the tidal currents attain a velocity of 1.5 to 2 knots at springs, the flood current setting in a SW direction and the ebb current in a reverse direction. Eddies, clearly discernible from a distance of 5 miles offshore, are formed abreast that part of the coast between Mys L'gotnyy and Mys Vneshniy. Winds opposing the tidal currents cause a confused sea in the vicinity of these capes.

6.18 Ostrov Iony (56°24'N., 143°23'E.), about 172 miles E of Poluostrov Longdar Negotni, is a barren rock, 165m high. Generally, the shores of the island consist of precipitous cliffs rising sheerly from the sea to heights of 30 to 45m high. From the offing Ostrov Iony has the appearance of a haystack.

A group of four rocks, 9 to 12m high, lies about 0.5 mile NNW of the island. Other detached rocks lie off the island at about the same distance. Several detached rocks lie 0.1 to 0.2 mile off the S side of the island.

A detached above-water rock, existence doubtful, is reported to lie about 9.5 miles SSE of the island.

A depth of 27.4m is reported to lie about 15 miles SSW of the island.

A depth of 15.1m lies about 48 miles SE of the island. A depth of 11.9m lies 28.5 miles NNW of the island, and a depth of 12.8m was reported (1970) to lie 20 miles S of the island.

Winds—Weather.—The currents impinging on the steep rise of the island from the sea bottom force the colder bottom water to the surface of the sea causing, in the vicinity of the island, a most protracted dense fog enveloping the island for the greater part of the navigational season. Although the fog becomes somewhat less dense in the latter part of the summer, it is only when the NW autumnal winds begin to prevail that the number of days with fog decreases markedly.

Tides—Currents.—Ostrov Iony lies in the region of the weak constant counterclockwise current, setting here in a general S to SW direction. This current is overborne by the tidal currents, which attain a velocity of 1.5 to 2 knots at springs. The flood current sets in a W direction, and the ebb current in an E or ESE direction.

Numerous eddies, small whirlpools, and tide rips, more pronounced close to the shore, extend as far as 10 to 15 miles offshore on the W, N, and E sides of the island, but much farther on the S side.

Caution.—Ostrov Iony should be given a wide berth, as the island is ordinarily enveloped in dense fog during the navigation season. Depths of 183m will indicate a position 8 to 20 miles offshore, depending on the direction of the approach. All precautions should be taken upon obtaining a depth of 92m. The increasing number and intensity of eddies, as well as

a sudden increase in the number of seabirds, will indicate that the vessel is close to the island when the sea is calm. Usually the roar of thousands of sea lions on the rookeries of the island becomes audible at a distance of 1 to 1.5 miles offshore.

Poluostrov Longdar Negotni to Udskeya Guba

6.19 Zaliv Ayan (56°27'N., 138°09'E.), on the S side of Poluostrov Longdar Negotni, is entered between Mys Savaya, previously described, and Mys Zheltyy, marked with reddish-yellow precipices about 1.3 miles NW. There is a small settlement, but no commerce, in Zaliv Ayan. The bay is the most sheltered anchorage on the NW shore of the Sea of Okhotsk.

A large pillar rock lies near the shore a short distance N of Mys Savaya. Ostrovok Chayachiy, a cliffy islet, about 0.7 mile NNW of Mys Savaya, is connected to a rocky headland, 90m E, by a drying ledge.

Banka Lorga Angra, a partly drying steep-to rocky shoal, extends to about 0.3 mile E and SE of Mys Zheltyy. The sea breaks over the shoal at HW.

Winds—Weather.—The period of calms and light airs extends through the spring and early summer. Winds increase in force gradually toward the latter part of the summer and attain their maximum force late in the autumn, but lessen gradually toward the spring.

From May to August, SE winds, alternating with somewhat stronger NE winds, prevail. From October to February, NW to N winds prevail. The latter part of September, October, and November is the period of protracted NE or SE storms. Sudden squalls emerge occasionally from the valleys at the head of the bay during either NW or NE winds.

Northeasterly winds are accompanied with poor visibility and bad weather. South to SSE winds bring fog. Winds from the S through W to NW are accompanied by clear weather.

Precipitation in Zaliv Ayan and its vicinity is much greater than elsewhere in the Sea of Okhotsk. Nearly 90 percent of the total precipitation per year is recorded during summer and autumn, the maximum being during August and September.

The highest temperature on record for 11 years of observation is 30°C and the lowest is -36.1°C.

May, June, and July is the period of the most fog. The number of days with fog decreases considerably by the first half of August and is rare in the latter part of this month. Fog is an exception during the offshore winds prevailing here through the autumn and winter.

Ice.—The head of the bay freezes at the end of November, and the ice spreads rapidly over the whole bay, attaining a maximum thickness of 0.8m. By the end of March the coast is fringed with ice to a distance of 25 to 30 miles.

In this vicinity the ice begins to break in April and, as a rule, moves SW along the coast, but masses of broken ice are brought here from the N coast of the Sea of Okhotsk and remain along this coast to the end of June or the middle of July. The average date for the complete freezing is the 29th of November, and that of the breaking of the ice in the spring is the 11th of April.

Tides—Currents.—The MHW interval in Zaliv Ayan is 12 hours 39 minutes. The tides are semidiurnal. At springs, the maximum tidal rise is 2.9m. At neaps, the HHW rise is 2.3m

and the LHW rise is 0.2m. The highest water occurs on the second or third day after the new or the full moon.

The tidal currents are more pronounced along the E shore of the bay, attaining a velocity of 1.5 knots in the vicinity of Mys Savaya, but decreasing to 1 knot about halfway along the E shore, and are imperceptible near the head of the bay.

Depths—Limitations.—There are depths of 25 to 30m in the middle of the entrance to Zaliv Ayan, shoaling gradually to about 14.6m, sand, between Ostrovok Chayachiy and Banka Lorga Angra, then to depths of 5.5m about 0.3 mile from the head of the bay.

Aspect.—Gora Longdar, the summit of Poluostrov Longdar Negotni, and Gora Uyskaya, about 10 miles WSW of Mys Zheltyy, form excellent landmarks discernible in clear weather from 35 to 50 miles. Gora Uyskaya, about 2 miles inland, has two pointed summits, 1 mile apart. It has the appearance of a single cone-shaped mountain on NW bearings.

Anchorage.—Anchorage can be taken in 7.3 to 11m, sand and gravel, N of Ostrovok Chayachiy, and WSW of a sandy strip separating a small lake from the bay. Small vessels can anchor in about 7 to 9m, sand and mud, about 0.5 mile from the head of the bay. Zaliv Ayan is sheltered from NE winds, but even with NE winds a considerable swell enters. During strong S winds, the anchorage in the bay become untenable.

Caution.—The approach to Zaliv Ayan presents no difficulties in clear weather. Vessels approaching the bay in fog would have a somewhat better chance of identifying the coast S of Poluostrov Longdar Negotni, where short periods of clear weather occur more often than N of this peninsula.

6.20 Mys Musikan (56°14'N., 137°50'E.), with a very high coast, has rocks, which dry about 3m, extending about 0.2 mile offshore. Mys Lantarskiy, about 7 miles farther SSW, may be identified by a detached conical rock, about 31m high, lying 1.2 miles N of the point and close offshore.

Mys Borisova (55°57'N., 137°23'E.), lying 17 miles SW of Mys Lantarskiy, is the extremity of a promontory which rises to a height of 546m. A small islet, about 1.7 miles N of the cape, may help to identify the cape when coming from the N.

Zaliv Borisova, the bay W of Mys Borisova, has steep-to shores except near its head. Depths of 26 to 37m are in the entrance and also in the greater part of the bay, but decrease rather suddenly to depths of 9.1 to 11m near the head, and merge abruptly into the shoal water extending from the mouth of the rivulet at the head of the bay.

Anchorage.—Anchorage can be taken in Zaliv Borisova in depths of 11 to 15m, sand and mud, good holding ground, about 0.5 mile from the head of the bay, with Mys Borisova bearing 123°. This anchorage is sheltered from NE winds. Although considerably abated, a heavy swell sets into the bay even during NE winds. During fresh offshore winds, and particularly during NW winds, this anchorage is exposed to sudden strong gusts of wind from the valley of the rivulet.

Mys Otlichitel'nyy (55°47'N., 137°02'E.), 15 miles SW of Mys Borisova, is steep-to. A very high rock, connected to the cape, rises to half the height of the cliffs and is conspicuous on NE and SW bearings, but is not discernible on the background of the bluffs of the peninsula. Close to the point the mountains are 900m high.

Mys Ukoy (55°38'N., 136°46'E.), 13 miles SW of Mys Otlichitel'nyy, steep-to and consisting of high and prominent rocks, is a narrow tongue-shaped cape jutting out from the S side of an elevated peninsula. A mountain, rising to a height of 536m near the base of Mys Ukoy, has on its S side a serrated ridge sloping toward the extremity of the cape.

Four detached pillar rocks are located 4 to 6 miles NNE of Mys Ukoy. The outer and largest rock is about 0.3 mile offshore and is steep-to.

Zaliv Ukoy, immediately W of Mys Ukoy, has depths of 12.8 to 14.6m on the parallel of Mys Ukoy, decreasing to 9m towards the head of the bay. Steep-to shoals border the head of the bay.

Anchorage.—Anchorage can be taken in 9 to 10m, sand and gravel, with Mys Ukoy bearing 115°, distant 1.7 miles. This anchorage is sheltered from NE winds, but is exposed to strong gusts of wind occurring during offshore winds.

Mys Eskan, about 10 miles SW of Mys Ukoy, is high, steep, and prominent from the SW. A mountain, about midway between Mys Ukoy and Mys Eskan, rises to an elevation of 1,583m and is the highest point on the NW coast of the Sea of Okhotsk.

Udskaya Guba

6.21 Udskaya Guba lies W of Shantarskiye Ostrova, and is entered between Mys Madzhalinda, 23 miles SW of Mys Eskan, and Mys Mal Dugandzha, about 40 miles SSE. The bay has shores covered with trees, chiefly fir.

Winds—Weather.—Calms and light airs, occasionally interrupted by fresh NE or E winds, prevail in Udskaya Guba through May and June. Southwesterly winds, gradually increasing in force and also occasionally interrupted by fresh NE winds, become prevalent during the first half of July and last until August. This is the best part of the navigational season and all winds, except those from NE, attain moderate force. Between the middle of August and early October, SW winds, which gradually increase in force, are frequently interrupted by fresh W to NW winds.

Northeasterly winds become more frequent in September and attain storm force. October and November in Udskaya Guba is the season of stormy weather. Northwesterly gales, which may be steady for a week or longer at a time, alternate with NE storms, being separated from each other by short-lived calms. Northwesterly winds prevail through the winter, but gradually lose their force and frequency by March or April, the beginning of the period of calms and light airs.

Northeasterly winds are accompanied by poor visibility, bad weather, and cause very heavy swells in the bay. It has been noticed that a light mist obscuring the horizon and small patches of fog covering the higher mountain peaks during periods of normal, or slightly higher barometric pressure indicate the approach of NE gales, which begin as soon as the barometric pressure begins to fall.

The season of fog in Udskaya Guba lasts throughout the spring and the first half of the summer. Beginning in the first half of July, fog in the bay is not quite as frequent and protracted.

Ice.—The rivers discharging into Udskaya Guba freeze in the latter half of October. Early in November the first shore ice appears, which gradually grows in thickness and seaward expanse, attaining its greatest development in the month of March and remaining in this state until the middle or the latter part of May. Usually the ice begins to break up during the latter part of May and is gradually carried out of the bay by the tidal currents. Often the bay is clear of ice by the middle of July, but after particularly severe winters the bay is ice-bound and remains inaccessible throughout the navigational season. In favorable years the bay may clear of ice in June.

Tides—Currents.—The MHW interval at the head of Udskaya Guba is 3 hours 29 minutes. The tides are semidiurnal. At springs, the tidal rise varies from 6.1 to 7.3m. At neaps, the HHW rise is 4.2m and the LHW rise is about 1.5m. The highest water occurs on the third or fourth day following the new or the full moon.

The tidal wave advances into Udskaya Guba through the N entrance between the mainland and the W side of Ostrov Feklistova, and also through the S entrance between the mainland and the S side of this island. In the N entrance into the bay the flood current sets in a SW direction and attains a velocity of 2.5 to 3 knots at springs, while in the S entrance the flood current sets in a W direction and attains a velocity of 4 to 5 knots at springs. These two flood currents meet in the area between Ostrov Medvezhiy and Mys Tyl'skiy, about 20 miles farther W, and cause an extensive whirlpool in a counterclockwise direction, resulting from the flow of the flood current in a W direction N of Ostrov Medvezhiy, but in an E direction and a N direction, respectively, S and E of this island.

The ebb currents have somewhat greater velocities and durations than those of the flood currents. The velocities of the tidal currents at springs are about twice as great as those at neaps.

6.22 Northwest side of Udskaya Guba.—Mys Madzhalinda (55°17'N., 136°07'E.) is steep-to, clear of dangers, and rises steeply to an elevation of 558m. A low, sandy beach lies at the mouth of a rivulet, about 1.5 miles W of Mys Madzhalinda.

A conspicuous, flat, wooded plateau extends about 3 miles SW from the low sandy beach. The plateau ascends slightly inland, and faces the sea with grayish-brown cliffs, 45 to 60m high.

Mys Nosorog (55°10'N., 135°51'E.), 10 miles SW of Mys Madzhalinda, can be recognized by a conspicuous hump on its seaward side, which is conspicuous on NE and SW bearings.

Severo-Vostochnaya Gavan', a small bay 1.5 miles W of Mys Nosorog, offers shelter from offshore winds. Mys Peshchernyy, a small cliffy cape, identified by a grotto near its base, lies about 0.6 mile WSW of Mys Nosorog. A conspicuous white cliff, 2 miles S of the bay, forms a good landmark when approaching from the SW. It is conspicuous against the dark brown of the coast on either side.

Anchorage.—Anchorage can be obtained in depths of 24m, gravel, about 0.7 mile WSW of Mys Peshchernyy, or elsewhere in the bay according to the draft.

Mys Manorskiy (55°07'N., 135°42'E.), 4 miles SW of Mys Nosorog, is the termination of a mountain spur approaching the

sea from the W, and is conspicuous by its height rising to an elevation of 570m. A short reef projects S from the extremity of the cape, and similar reefs project seaward in places from the peninsular projection formed by the seaward end of the mountain spur.

Mys Antykan, about 23 miles SW of Mys Manorskiy, consists of a small detached hill, sloping steeply seaward.

6.23 Head of Udkaya Guba.—The head of Udkaya Guba, between Mys Antykan and Mys Tyl'skiy, about 19 miles SE, is generally low and consists mostly of accumulations of sand and shingle. Mys Chumikan, about 9.5 miles SSE of Mys Antykan, lies on the E side of the mouth of Reka Uda. The settlement of Chumikan is situated principally on the W side of Mys Chumikan. The head of the bay is fringed by a drying coastal flat extending as far as 4 miles off the mouth of Reka Uda.

Mys Tyl'skiy (54°40'N., 135°38'E.) is the NW extremity of a conspicuous precipitous cape, with its seaward face 2.5 miles long in an WNW-ESE direction and rising to a height of 217m near the E extremity of the cape.

A drying reef borders the seaward face of the cape for 0.5 mile seaward. There are depths of 7.3m, shingle or occasionally sand, about 1.3 miles N of the cape, decreasing abruptly W of the cape. A light is shown from a 22m tower, at position 54°39.8'N, 135°38.0'E, on Mys Tyl'skiy. The light is shown from 20 July to 25 October.

Tides—Currents.—Tidal currents attain a velocity of 2.5 to 3 knots at the anchorage.

Anchorage.—Vessels with cargo should anchor at a distance of not less than 8 or 9 miles from the coast. The best anchorage off the mouth of Reka Uda is about 9 miles offshore, in 7m, poor holding ground of rock, covered with a thin layer of sand and gravel, with Mys Antykan bearing 282°, the settlement of Chumikan bearing 217°, and Mys Tyl'skiy bearing 149°.

Caution.—Northeasterly winds, which occur here intermittently during any time of the year, occur up to 2 days at a time, and are particularly strong in the autumn. These winds are accompanied by foul weather and poor visibility during which navigation in the bay is dangerous. These winds also cause heavy sea and swell, rendering the anchorage unsafe. Often a light ENE breeze precedes the NE winds, which begin as soon as the barometric pressure begins to fall. Vessels anchored in the W part of Udkaya Guba at this time should seek shelter on the lee side of Ostrov Medvezhiy.

6.24 South side of Udkaya Guba.—Mys Al'skiy (54°35'N., 136°05'E.), the E entrance point of Toromskaya Guba, is formed by a detached thickly wooded hill, rising to a height of 244m from a low shore of sand and shingle. Drying rocks fringe the extremity of the point on all sides.

Mys Medvezhiy Odeyalo, about 5 miles ENE of Mys Al'skiy, is precipitous, and formed by a detached, gently sloping, thickly wooded hill, rising to a height of 244m near the coastline.

Ostrov Medvezhiy, a thickly-wooded island, lies with its NW end about 5 miles NNE of Mys Medvezhiy Odeyalo. The island rises to a height of 229m in its NW part and to 204m

near its E end, which is connected to the rest of the island by a precipitous neck of land about 90m high.

The N shore of the island is almost steep-to and is free of dangers, with the exception of a few rocks lying close offshore. Rocks extend about 0.5 mile off the W side of the island. There are fairly even depths of 8.2 to 10m off the W half of the S side of the island. The E end of the island is fringed with generally shallow water on all sides and scattered detached shoals in places.

The channel separating Ostrov Medvezhiy from the mainland has an intricate fairway with least depths of 5.5m in its E part, and should not be attempted without local knowledge.

The coast S of the island, between Mys Medvezhiy Odeyalo and Mys Klin, about 7 miles ESE, is fringed by shallow water, and depths of 1.8 to 3.6m lie 0.5 mile offshore.

Tides—Currents.—Tidal currents in the vicinity of Ostrov Medvezhiy attain a velocity of 3 to 4 knots, the flood current setting around the island in a counterclockwise direction, and the ebb current, in a reverse direction.

Anchorage.—Anchorage may be obtained between the E end of Ostrov Medvezhiy and the mainland E in depths of 5.5 to 14.6m over an uneven bottom with good holding ground. The anchorage is protected from NE gales, but is not safe later in the year than the middle of September. Local knowledge is necessary.

Ostrova Sivuch'i Kamni consists of two detached groups of barren islets and rocks. The NW group (54°49'N., 136°17'E.), about 7 miles N of the NW extremity of Ostrov Medvezhiy, consists of a cone-shaped islet, 232m high. A group of low above-water rocks lies about 1.5 miles WNW of the islet.

The SE group consists of an islet about 2.5 miles SE of the cone-shaped islet. This islet is 0.5 mile long and 171m high. A large pillar rock, rising sheerly from the sea to a height of 79m, lies 0.7 mile SW of this islet.

The islets and rocks of Ostrova Sivuch'i Kamni are fringed by short drying reefs, and the channel between the two groups has not been surveyed.

Caution.—Tidal currents N and S of Sivuch'i Kamni set W with the flood current and E with the ebb at a rate of 4 to 5 knots.

Mys Mal Dugandzha (54°41'N., 136°39'E.), the S entrance point of Udkaya Guba, rises to a height of 229m, is steep-to, and consists of dark slate conspicuously marked by bands of light-colored strata. Excellent anchorage can be taken in depths of 9 to 16m, SW of Mys Mal Dugandzha during S winds.

Mys Klin (54°35'N., 136°23'E.), 10 miles SW of Mys Mal Dugandzha, is formed by the N spur of a mountain rising to a height of 518m, about 2.5 miles S of the cape. A conspicuous triangular white patch marks the NW part of the cape.

6.25 Zaliv Lyutsun, entered between Mys Mal Dugandzha and Mys Bol Dugandzha, about 7 miles ESE, has thickly wooded shores, is high at the entrance points, decreases in height within the entrance, and merges into low sandy shores at the head of the bay.

Depths of 12.8 to 18.3m, rocky bottom, are in the entrance, decreasing to 5.5m, mostly shingle, in the middle of the bay,

then shoaling to the head of the bay, which dries for about 0.4 mile.

Tides—Currents.—The MHW interval in Zaliv Lyutsun is approximately 3 hours. The tides are semidiurnal. At springs, the maximum tidal rise is 6.1m. At neaps, the HHW rise is 3m and the LHW rise is 1.8m.

Near the entrance into the bay the tidal currents attain a velocity of 3.5 to 4 knots at springs, and 2 to 3 knots at neaps, decreasing gradually within the entrance. The flood current sweeps the shores in a counterclockwise direction, and the ebb current, in a reverse direction.

Anchorage.—Anchorage, sheltered from winds of the SE and SW quadrants, can be taken in suitable depths, but during S winds the bay is exposed to occasional strong squalls from the valley at its head. Anchorage during NE winds is dangerous due to the heavy swell which is raised. The tidal currents tend to place an anchored vessel broadside.

Mys Bol Dugandzha (54°38'N., 136°50'E.), 7 miles ESE of Mys Mal Dugandzha, rises to a pointed peak, 250m high, near its extremity. The peak falls steeply seaward, and contrasting with the round hills in the vicinity, is often visible when the coast below is obscured by fog.

The peninsula, of which Mys Bol Dugandzha is the NE extremity, rises to a conspicuous pointed peak 488m high about 5 miles SSW of the cape. The cape is steep-to, except for a small group of drying rocks, close under its cliffs.

Shantarskiye Ostrova

6.26 Shantarskiye Ostrova consists of four large islands, five small islands, and three islets. The large islands have a hilly, rather than a mountainous aspect due to the fairly gentle slopes of the mountains. The mountain slopes are covered with thick forest, and the valleys are covered with luxuriant grass. The small islands, also high, have steep cliffy shores and, as a rule, are covered with shrub. The rocky islets have pointed summits, and are barren.

Depths between the islands are generally 20 to 45m. Navigation is dangerous due to the strong and irregular currents, sometimes attaining velocities of 5 to 7 knots. Steep rocks fringe the smaller islands and the headlands of the larger islands, and there are also other detached rocks.

Ostrov Sakharnaya Golova (54°58'N., 136°30'E.) has a cone-shaped hill, 302m near the E end of the island. The W part is formed by a flat-topped elevation rising steeply from the sea to a height of 183m, and is connected to the E part of the island by a somewhat lower isthmus. The island is considered to be steep-to, though only sparse soundings have been taken in the vicinity.

6.27 Ostrov Feklistova lies with **Mys Belyy** (55°06'N., 137°09'E.) at its NE extremity. Mys Belyy rises to a height of 354m near its extremity, and faces the sea with nearly vertical grayish-white cliffs. A white rock, about 4.5 miles SSW of Mys Belyy, is a very prominent landmark. Mys Krasnyy, about 11 miles SSW of Mys Belyy, consists of red cliffs and is conspicuous; the point is fringed by above-water rocks connected to its extremity by a short reef.

Mys Pokatyy, about 7.5 miles W of Mys Belyy, is formed by a rounded hill, about 274m high, sloping to the sea. The cape is fringed by rocks, which cover at HW. A wide river valley approaches the sea from the S, midway between the capes.

The coast from Mys Pokatyy to Mys Zapadnyy, about 13 miles SW, is steep-to and clear of dangers except for a reef projecting 0.3 mile seaward from the face of Mys Zapadnyy. A cape, about 2.5 miles S of Mys Zapadnyy, has a reef extending 0.5 mile S from it, and terminating about 0.3 mile offshore. A detached drying rock, marked by breakers during the upper half of the tide, lies near the extremity of the reef.

Tides—Currents.—The flood tidal currents set W, then SW, respectively, on the N and W coasts of Ostrov Feklistova, attaining velocities of about 4 knots at springs. The ebb currents set in the reverse direction.

The tidal currents attain a velocity of 4.5 to 5 knots in the vicinity of **Mys Vkhodnoy** (54°53'N., 136°44'E.). The flood current that sets in a SW direction along the W side of Ostrov Feklistova meets the flood current that sets in a W direction along the S side of the island, causing tide rips and fairly conspicuous eddies, which are not as pronounced and are located closer to the shore during the ebb.

Guba Lebyazh'ya, a bay indenting the S side of Ostrov Feklistova, is entered E of **Mys Arka** (54°54'N., 136°47'E.), located about 1 mile NE of Mys Vkhodnoy. Ostrovok Arka, an islet about 0.1 mile E of Mys Arka, has a natural tunnel through it and is connected to the cape by a drying ledge. A rocky patch, steep-to on its E side, extends 0.2 mile ESE of Ostrovok Arka.

Tides—Currents.—Tides in Guba Lebyazh'ya are semidiurnal, the MHW interval being 3 hours 8 minutes. The tidal rise is up to 6.1m at springs and about 4.6m at neaps.

Depths—Limitations.—Depths in the entrance to Guba Lebyazh'ya, between the drying reef extending ESE from Ostrovok Arka and Ostrov Sukhotina, are 11 to 24m, but immediately within there is a ridge, which stretches nearly across the bay with depths of 7.8 to 11m. The bottom throughout is ooze.

Aspect.—Ostrov Sukhotina, a conspicuous thickly wooded island, rising to a height of 256m in its S end, lies about 5 miles E of Mys Arka. The cliffs of the islet are dark in color.

Anchorage.—Guba Lebyazh'ya is sheltered from N winds and affords the best anchorage in the W part of Shantarskiye Ostrova. The bay has three bights at its head, Reyd Yengel'ma, Bukhta Soboleva, and Bukhta Rosseta, named from W to E. Bukhta Yengel'ma is reported to afford the best protection.

Reyd Yengel'ma, entered between Mys Arka and Mys Krasnyy, about 2.5 miles NNE, has cliffy shores and a narrow sand and shingle beach at its head. Ostrovok Shilova lies about 1 mile N of Mys Arka. A detached rock lies a short distance off the NE end of the islet.

Banka Gaykovskogo, a shoal with a least depth of 2.7m in its central part, lies in the middle of and close within the entrance. The shoal has a width of about 0.5 mile.

The channel between the N side of the shoal and the N shore, about 0.5 mile N, has prevailing depths of 6.4 to 8.2m, and is the recommended entrance into the inner part of the bight.

The N shore of the bight is comparatively steep-to, but the head of the bight and that part of the W shore N of Ostrovok Shilova are fringed by shallow water with depths of 1.8m extending 0.3 mile offshore. Depths of less than 5.5m extend about 0.3 mile N of Ostrovok Shilova.

Anchorage.—Vessels with a suitable draft can obtain anchorage in depths of about 7.3m, good holding ground of sand, or sand and mud, about 0.6 mile N of the NE end of Ostrovok Shilova, with this point in range with Ostrovok Arka. This anchorage is partly sheltered from swell by Banka Gaykovskogo, the tidal currents being imperceptible.

Caution.—During strong NW or strong NE winds this anchorage is exposed to occasional strong gusts of wind blowing down the hills.

6.28 Bukhta Soboleva (54°56'N., 136°49'E.), the bight E of Mys Krasnyy, is exposed to violent gusts of wind from the river valley at the head of the bight during NW winds.

The depths at the entrance into the bight are about 10m, decreasing gradually to 5.5m, mud, about 0.5 mile off the head. Both entrance points are clear of dangers.

Bukhta Rosseta (54°56'N., 136°54'E.), the bight forming the NE end of Guba Lebyazh'ya, is open to SW winds and is also exposed to rather violent squalls from the valley at the head of the bight during NE winds, which occur here occasionally all year round. There are depths of 11 to 13m in the middle of the entrance, decreasing to depths of 5.5m about 0.5 mile within the entrance.

The coast from Guba Lebyazh'ya to the SE end of Ostrov Feklistova consists of sheer grayish-brown cliffs backed by coastal hills rising to heights of 241m. This coast is steep-to and clear of dangers.

Severnnyy Proliv, the strait between Ostrov Feklistova and Ostrov Bol'shoy Shantar, is deep and clear of off-lying dangers. Navigation through the strait on a clear day presents no difficulties; however, in case of fog, the fairly even depths and uniform rocky bottom furnish no guidance.

Tides—Currents.—Tidal currents attain a velocity of 3.5 to 4 knots in the N half, and a velocity of 2.5 to 4.5 knots in the S half of the strait; the flood current setting in a SSW direction, and the ebb current in a reverse direction.

Ostrov Bol'shoy Shantar (55°00'N., 137°46'E.), the largest of Shantarskiye Ostrova, is hilly with the greatest elevations extending along the E side as an irregular mass of rounded and wooded summits. The shores are generally cliffy, sometimes precipitous, and bordered close offshore by numerous dangers, especially in the N part.

6.29 West side of Ostrov Bol'shoy Shantar.—Mys Severo-Zapadnyy (55°11'N., 137°33'E.), the NW extremity of Ostrov Bol'shoy Shantar, is a steep, cliffy cape of distinctive red color. The cape is steep-to and clear of dangers.

Tides—Currents.—Swift tidal currents in the vicinity of the cape cause pronounced eddies and numerous tide rips, which, even during moderate winds, are present in the vicinity of the cape.

From Mys Severo-Zapadnyy the high cliffs decrease in height toward Mys Gorbatyy, about 13 miles SSW. Mys Gorbatyy is rendered conspicuous by its convex slope. A pillar

rock lies off the cape, and a similar rock lies about a mile N of the cape.

Mys Raduzhnyy (54°45'N., 137°13'E.), a rugged cape lying 16 miles SSW of Mys Gorbatyy, is the SW extremity of Ostrov Bol'shoy Shantar. The cape is clear of dangers and almost steep-to.

Ostrov Utichiy comprises two islets and a pillar rock, located on a common rocky base. The SW and larger islet, about 4.5 miles SSW of Mys Raduzhnyy, rises to a height of 183m in its N part. The smaller islet, about 0.5 mile NE of the larger islet, rises to a height of 106m. The pillar rock lies about 0.5 mile farther NE.

Tides—Currents.—Tidal currents, which cause pronounced whirlpools in the vicinity of Ostrov Utichiy, attain a velocity of 4 to 4.5 knots. The flood current sets in a WNW direction, and the ebb current in a reverse direction.

Ostrov Ptichiy (54°36'N., 137°05'E.), about 5.5 miles SW of Ostrov Utichiy, has the aspect of a smooth rounded hill, with its summit, 290m high, in the S part of the island. The island has high, cliffy shores, and the S side of the island is fringed by rocks.

The channel separating it from the mainland W is 6 miles wide and has depths of 22 to 24m in the fairway. It is free from dangers. Landing can be effected on a sandy beach on the NW side of the island.

Tides—Currents.—Tidal currents attain a velocity of 4 to 4.5 knots in the vicinity of the island at springs.

6.30 North side of Ostrov Bol'shoy Shantar.—The coast from Mys Severo-Zapadnyy to **Mys Severnyy** (55°12'N., 137°40'E.), about 4 miles ENE, changes in color from red to grayish-brown. Mys Severnyy, the N extremity of the island, is marked by a group of small pillar rocks and drying rocks scattered to 0.4 mile off its extremity. Considerable eddies caused by the tidal currents extend far seaward. A light, from which a radiobeacon transmits, is located on Mys Severnyy. The light is shown from 1 June to 1 December. A fog signal sounds 117m NW of the light.

Tides—Currents.—Tidal currents off this coast attain a velocity of 2.5 to 3 knots, the flood current setting WNW, and the ebb current in a reverse direction.

Mys Bokovikova, about 11 miles ESE of Mys Severnyy, is conspicuous, and fringed by pillar rocks and islets. One of the islets, known as Kamen' Lev, or Lion, due to its shape, lies on the E side of the cape. The seaward sides of these islets are steep-to.

A beach of sand and shingle extends about 5 miles SE from a position about 3.5 miles SSE of Mys Bokovikova. Ozero Bol'shoye, a lake with brackish water of red tint, lies on the inner side of the beach. Vessels with local knowledge and a draft of 3m enter the lake at HW via a shallow channel.

Mys Severo-Vostochnyy (55°02'N., 138°15'E.), a rather flat-topped cape, consists of forbidding cliffs, which rise sheerly from the sea to heights over 300m on its N and S sides, but forms a slanting slope at its extremity.

The dark-brown color of the cliffs on the N and NE sides of the cape contrasts effectively with the gray and white colors of the cliffs on the E and S sides of the cape.

A reef projects about 0.3 mile N of the extremity of the cape.

Ostrov Prokof'yeva lies with its SW extremity 2 miles ENE of Mys Severo-Vostochnyy. The shores of the island are high and cliffy. The mountains attain their greatest elevations in the E and NE parts of the island, where they rise to heights exceeding 762m near the shoreline and face the sea with sheer gray cliffs resembling the ruins of a huge castle.

The shores of the island are steep-to and clear of dangers. A blunt spit of shingle projects S from the SW end of the island. The spit is steep-to. There is a hollow with a stream flowing through it on the NE end of the island.

Tides—Currents.—Tidal currents in this locality have a rate of 2 to 2.5 knots, the flood current setting W and the ebb E. Tidal currents set NW with the flood, and SE with the ebb, attaining a velocity of 3 to 3.5 knots, in the channel separating Ostrov Prokof'yeva from Ostrov Bol'shoi Shantar.

6.31 East and S sides of Ostrov Bol'shoi Shantar.—A small rocky headland, about 9 miles SW of Mys Severo-Vostochnyy, can be identified by a pillar rock, the only one in this vicinity, located a short distance off its extremity. A detached hill, with steep slopes, rises to a height of 259m within the headland.

Mys Kusova (54°47'N., 138°01'E.), the E point of a blunt rounded point, faces the sea with a steep-to, somewhat serrated slope. A reef, which dries about 4.9m, extends about 0.3 mile from the coast, 2.5 miles N of Mys Kusova, and short reefs project from the coast 2.3 miles and 4 miles SW, respectively, of Mys Kusova.

Ostrov Kusova, with its W end about 7.5 miles ESE of Mys Kusova, rises to a height of 644m and forms an excellent landmark. The shores of the island are high and cliffy. The island is steep-to.

Mys Filippa, the S extremity of Ostrov Bol'shoi Shantar, 13 miles SW of Mys Kusova, slopes steeply to the sea from a height of 183m. At the base of the cliffs is an accumulation of rocks and crags fringed by drying rocks.

Tides—Currents.—The tidal currents along the E coast of Ostrov Bol'shoi Shantar attain a velocity of 3 to 3.5 knots in the vicinity of Mys Kusova, but a velocity of 4.5 to 5 knots in the vicinity of Mys Filippa. The flood and the ebb currents set in a SW and NE direction, respectively.

Guba Yakshina, the bay indenting the SW side of Ostrov Bol'shoi Shantar, is entered between Mys Filippa and Mys Raduzhnyy, about 18 miles WNW.

Mys Olay, the extremity of a small, elevated, thickly wooded projection, about 8 miles NNW of Mys Filippa, separates two river valleys. Mys Olay is fringed by drying rocks, and a detached drying rock lies about 0.3 mile SSW of its extremity.

Mys Anaur, about 2.5 miles NW of Mys Olay, faces the bay with high, steep cliffs. A detached hill, 302m high, lies near its extremity. A partly drying reef extends 0.4 mile W of Mys Anaur.

Mys Topaznyy, on the W shore of the bay, about 6.5 miles NE of Mys Raduzhnyy, is rendered conspicuous by a small, cliffy islet, with a rounded summit, close off its extremity.

A bank, which dries, extends a considerable distance from the mouth of Reka Yakshina at the head of the bay.

Ice.—Guba Yakshina is frozen by December in average years. The ice breaks up in late May or early June, and finally disappears in July. The ice may reach a thickness of 3.8m.

Tides—Currents.—The MHW interval in Guba Yakshina is about 3 hours, the tidal rise being up to 4.9m at springs. The flood tidal current flows counterclockwise around Guba Yakshina, and the ebb in the opposite direction. The tidal currents attain a velocity of 3.5 to 4 knots near the entrance, but do not exceed 2 knots in the innermost part of the bay.

6.32 Severo-Vostochnyy Proliv, the strait between Ostrov Bol'shoi Shantar and Ostrov Malyy Shantar, should only be used by vessels with local knowledge.

Kamni Diomida, consisting of two detached serrated rocks, about 9.1m high, close together, and with several smaller rocks nearby, divides Severo-Vostochnyy Proliv into two passages. The fairway of both passages is deep, but a depth of 11m lies 0.1 mile N of a drying reef extending 1 mile NNE from Mys Uspeniya, the N point of Ostrov Malyy Shantar. The N side of Kamni Diomida appears to be steep-to. A vessel passing 0.5 mile N of the rocks observed no dangers.

Tides—Currents.—The tidal currents in Severo-Vostochnyy Proliv are swift, the flood current setting W and the ebb current, E. The flood current setting SW along the E side of Ostrov Bol'shoi Shantar combines with the flood current setting W from the Sea of Okhotsk and sets through the strait in a W direction, attaining a velocity of 7 to 7.5 knots, decreasing to 4.5 and 4 knots after passing the narrows.

Caution.—In misty weather the strait should not be attempted unless the extremity of Mys Filippa and Kamni Diomida are visible at the same time.

6.33 Ostrov Belichiy, an elevated, thickly wooded island, has generally high and cliffy shores, except for the narrow part of the island, which is low and sandy on both sides. A mountain rising to a height of 580m in the NE part of the island, and a mountain rising to a height of 311m in the SW part of the island, slope steeply toward the narrow part of the island.

Mys Severnyy (54°30'N., 137°55'E.), the N extremity of Ostrov Belichiy, is a vertical cliff, 183m high. A short drying reef extends NE from a pillar rock at the base of the cliff.

The coast between Mys Severnyy and Mys Vysokiy, about 2.5 miles SSW, has the aspect of a high wall. A short reef, drying in parts, extends E from Mys Vysokiy.

Ostrovok Severnyy, about 1 mile E of Mys Vysokiy, rises to a height of 108m, and has steep, cliffy shores on all sides. The channel between Mys Vysokiy and the islet has depths of 31m in the fairway and is clear of dangers.

Mys Krutoy (54°23'N., 137°49'E.), a sheer bluff, rises from the sea to a great height. A short reef extends E from its extremity. Ostrovok Sredniy, an islet about 0.7 mile SSE of Mys Krutoy, rises to a height of 94m. Partly drying reefs extend from the NE and SW ends of the islet. There are depths of 18.3m in the fairway separating Ostrovok Sredniy from Ostrov Belichiy.

Ostrovok Yuzhnyy (54°20'N., 137°47'E.), about 1 mile SSW of Ostrovok Sredniy, is a wooded islet, rising to a 137m hill in its S half. The N half of the islet is a flat-topped elevation, 125m high. A short reef, marked by two above-water

rocks near its extremity, extends from the NE side of the islet. The remainder of the island is clear of dangers. The fairway between Ostrovok Yuzhnyy and Ostrov Belichiy has depths of about 33m.

Tides—Currents.—The flood current sets in generally S and W directions along the E coast of Ostrov Belichiy. The ebb current sets in the reverse directions. The currents attain velocities of 4 to 5 knots inside the islets, and 3.5 to 4 knots outside. The currents cause eddies and tide rips.

6.34 Mys Obryvistyy (54°29'N., 137°50'E.), the NW point of Ostrov Belichiy, is a precipitous, steep-to cape, rising to a height of 305m in its vicinity. The entire W coast of Ostrov Belichiy is generally steep-to, with fairly even depths of 18.3 to 25m about 0.8 mile offshore.

Ostrov Malyy Shantar consists of hills with smooth and thickly wooded slopes. The island rises to a 286m summit in the middle part. The W side of the island has generally precipitous shores. Generally, the depths on the W side of Mys Uspeniya are uneven and this side of the cape should be avoided.

Mys Uspeniya (54°34'N., 137°38'E.), the N extremity of Ostrov Malyy Shantar, is the extremity of a peninsula which has generally low shores, except for a steep hill rising near its extremity. A reef, drying in parts, extends about 1 mile NNE from Mys Uspeniya to a fairly conspicuous pillar rock near the extremity. A depth of 11m lies about 0.1 mile N of the extremity of the reef.

Between Mys Uspeniya and Mys Severo-Vostochnyy, about 4.5 miles SSE, short reefs extend up to 0.5 mile seaward from the projecting capes. Mys Severo-Vostochnyy is formed by the steep cliffy slope of a coastal elevation, and a reef extends 0.4 mile SE from its extremity.

A depth of 14.6m lies about 2 miles N of Mys Gaykovskogo, the SE extremity of Ostrov Malyy Shantar.

Mys Gaykovskogo (54°23'N., 137°39'E.), on the W side of the narrows, is the extremity of a narrow elevated peninsula. The cape is marked by a group of pointed rocks, and a partly drying reef extends about 0.3 mile SE from its extremity. A partly drying reef extends about 0.2 mile E of the peninsula.

A detached, pointed, steep-to, above-water rock, about 1 mile ESE of Mys Gaykovskogo, divides the narrows of the strait into an E and W channel. A reef, which projects about 0.2 mile W from the SW shore of Ostrov Belichiy, lies with its outer extremity about 0.4 mile E of the detached rock. The E and W channels have depths of 29m and 31m, respectively, in the fairways.

Bukhta Abrek, on the S side of Ostrov Malyy Shantar, is entered between Mys Gaykovskogo and Mys Yengel'ma, about 2 miles W. The latter cape consists of high, reddish-brown, steep cliffs, backed by slopes rising to heights of 185m. A pillar rock lies at the extremity of Mys Yengel'ma, and a high pillar rock lies close offshore, about 0.5 mile WNW of this cape.

Mys Vnutrenniy lies about 0.8 mile NE of Mys Yengel'ma, and marks the W entrance point of a recess extending NW, which dries in its inner half. The bay is surrounded by hills except at the low head of the recess.

The depths in the middle of the entrance to Bukhta Abrek are 26m, decreasing to depths of 14.6m extending E of Mys Vnutrenniy. The shores of this part of the bay are steep-to, the 10m curve being 0.1 to 0.2 mile offshore.

There are depths of about 5.5m at the entrance to the recess, and at a distance of 0.1 mile from the head of the bay E of the recess.

The S coast of Ostrov Malyy Shantar, from Bukhta Abrek to Mys Yugozapadnyy, its SW extremity, consists of steep grayish-brown cliffs.

Tides—Currents.—The MHW interval in Bukhta Abrek is 3 hours 25 minutes. The tides are semidiurnal. At springs, the maximum rise is 4.9m. At neaps, the HHW rise is 3.9m and the LHW rise is 1.8m. The highest water occurs on the third or fourth day following the new or the full moon.

The tidal currents, which are swift outside the bay, decrease within the bay to a velocity of 1 to 1.5 knots in the vicinity of the anchorage and are imperceptible at the head of the bay. The flood current sets in a SW direction and the ebb current in a NE direction.

Anchorage.—Anchorage, sheltered from all winds except strong winds from the S and SE, can be obtained in convenient depths anywhere in Bukhta Abrek. The best berth is about 0.8 mile ENE of Mys Yengel'ma in depths of about 22m, sand, mud, and gravel. Anchorage can also be taken about 0.4 mile E of Mys Vnutrenniy in depths of 11 to 14.6m, good holding ground of mud and sand, or shingle.

6.35 Proliv Lindkhol'ma is the strait separating Ostrov Belichiy and Ostrov Malyy Shantar from the N end of Poluoostrov Tugurskiy. The strait has a minimum width of 2 miles between Mys Yuzhnyy, the S extremity of Ostrov Belichiy and Mys Seneka, the NE extremity of Poluoostrov Tugurskiy.

Proliv Lindgol'ma is deep and clear of dangers. Fairly even depths of 33 to 38m, shingle or occasional rock, prevail along the middle of the strait. Both shores are elevated and navigation through the strait on a clear day presents no difficulties, with the exception of the strong tidal currents.

Tides—Currents.—The MHW interval in the strait is 2 hours and 38 minutes. The tides are semidiurnal. At springs, the maximum tidal rise is 4.9m. At neaps, the HHW rise is 3.6m and the LHW rise is 1.5m.

The flood currents set W through Proliv Lindgol'ma and joins the strong current setting SSW from between Ostrov Belichiy and Ostrov Malyy Shantar, forming considerable eddies and whirlpools. The ebb current sets E and is more prolonged and stronger than the flood current. The strength of the current varies in different parts of the strait from 3.5 to 6 knots, being strongest off of Mys Seneka.

Anchorage.—Anchorage on the S side of Proliv Lindgol'ma, sheltered from winds from between SE and SW, may be obtained in a small bay 2 miles wide, immediately W of Mys Seneka in a depth of 18m. Local knowledge is necessary.

Caution.—Proliv Lindgol'ma should not be attempted in fog or on misty days when visibility is poor. Vessels approaching the strait from W with unfavorable weather can anchor off the middle part of the W side of Ostrov Malyy Shantar, which affords protection from all E winds. Vessels headed for

Udskaya Guba and approaching the strait from the E during NE or SE winds, which rapidly increase in force, are recommended to proceed N and around Shantarskiye Ostrova.

Tugurskiy Zaliv

6.36 Tugurskiy Zaliv, entered between Mys Seneka and Mys Bol'shoy Dugandzha, about 36 miles WNW, offers anchorage open to N winds in convenient depths. The E and S shores of the gulf are thickly wooded. The S part of the W shore is wooded, but farther N the hills are covered with scrub on the lower parts, with the peaks mostly treeless.

Ice.—Tugurskiy Zaliv is icebound by the end of October, or in some years by the middle of November. In the spring the ice begins to break up in May and, as a rule, the bay is clear of ice at a somewhat earlier date than Udskaya Guba or the sea in the vicinity of Shantarskiye Ostrova.

Tides—Currents.—The tidal rise at springs is 4.5 to 5.5m in the N part of Tugurskiy Zaliv and up to 6.4m in the S part of the gulf. The tidal currents attain velocities of up to 4 knots in the N part of the gulf, causing whirlpools and eddies, and attain velocities of 1.5 to 2 knots in the middle and S part of the gulf.

Depths—Limitations.—Depths at the entrance to the gulf are 18 to 37m, shoaling to less than 8.8m in the fairway about 10 miles from its head. The bottom nearly everywhere in the N half of the gulf is gravel, but there are one or two places where the bottom is rocky, and very rarely sand and mud. The bottom in the S part of the gulf is chiefly gravel. The entire head of the gulf is fringed by shallow water with depths of 3.6m or less extending across the gulf as far as 2.5 miles N of the peninsula at its head.

6.37 Mys Seneka (54°19'N., 137°44'E.), steep-to and clear of dangers, has sheer grayish-brown cliffs rising to a height of 152m. Numerous tide rips and eddies are formed in the vicinity of the cape.

The coast between Mys Seneka and Mys Bersen'yeva, about 12 miles W, is mostly steep and cliffy. Depths of 18 to 22m, rock or shingle, lie a distance of 0.5 mile off this coast, which is steep-to, except for short reefs projecting from the extremities of the capes in places.



Mys Bersen'yeva, distant 5 miles

Mys Otvesnyy, about 8 miles W of Mys Seneka, rises to a height of 226m and is conspicuous. A reef extends about 0.3 mile N of the cape.

Mys Temnyy, about 8 miles SW of Mys Bersen'yeva, faces the sea with dark cliffs, and two hills, similar in appearance, rise vertically from the coast and are conspicuous.

Mys Nosorog, a rocky point with grayish-brown cliffs lying about 7 miles farther SW, has a reef extending 0.3 mile W from its extremity. A high pillar rock lies close N of the reef. The

pillar rock, in range with the seaward slope of the cape, resembles the horn on a unicorn's head.

Mys Krayniy (54°02'N., 137°14'E.), lying 6 miles SSE of Mys Nosorog, rises to a range of mountains, 354m high, E of the cape. A shoal, which dries 1.5m, extends 0.1 mile off the cape.

Anchorage.—Anchorage, with shelter from N winds and out of the strength of the tidal currents, can be obtained between Mys Nosorog and Mys Krayniy, or S of Mys Krayniy. Local knowledge is necessary.

The coast from Mys Bol'shoy Dugandzha (described with Zaliv Lyutsun) to Bukhta Mamga, about 15 miles S, faces the sea with grayish-brown cliffs and precipices 91 to 122m high. A low islet, composed of boulders and connected to the shore by a drying boulder ledge, lies close offshore, about 2 miles S of Mys Bol'shoy Dugandzha.

Mys Nikta (54°34'N., 136°54'E.) is the SE extremity of an elevated, cliffy peninsula. A cube-shaped rock at its extremity is connected to the peninsula by a narrow, bluff isthmus. From a distance on certain bearings the cube-shaped rock has the appearance of an islet lying a short distance off the extremity of the cape, but on the background of the coast this rock is indiscernible.

A very conspicuous pillar rock, about 9 miles S of Mys Nikta, lies 0.5 mile off a rocky peninsula, which rises to a height of 423m in its middle part. A drying ledge connects the pillar rock to the coast. The pillar rock is a good landmark in the approach to Bukhta Mamga.

Bukhta Mamga (54°23'N., 136°47'E.) is entered between a cape lying 2 miles SW of the conspicuous pillar rock and the N extremity of a cape, about 2 miles farther S. The recess in the N part of Bukhta Mamga dries and is encumbered with rocks.

There are depths of 5.5m in the entrance to the bay, shoaling rapidly W. About 0.5 mile outside the entrance there are depths of 9.1 to 11m.

Anchorage.—Anchorage, protected from W winds, can be taken in depths of 10m, sand and gravel, about 1 mile SE of the N entrance point of Bukhta Mamga.

A blunt, elevated cape, with a seaward face about 2 miles in length, is located with its NE point about 6 miles S of Bukhta Mamga. A reef, with a fairly large, pointed pillar rock at its extremity, extends about 0.5 mile E from the NE extremity of this cape.

Mys Bol'shoy Largangda (54°08'N., 136°48'E.), a high, slightly projecting cape, is backed by a coastal elevation, 659m high. Mys Malyy Largangda, about 4 miles farther S, is the NE extremity of a blunt rectangular projection, and is rendered conspicuous by three large detached rocks at the foot of the elevation backing the cape.

The head of Tugurskiy Zaliv consists of a peninsula with high shores, which rises to heights of 250 to 280m about 1.5 miles inland. The shores are low and sandy near the mouths of the rivers on each side of the peninsula.

Zaliv Akademii

6.38 Zaliv Akademii is entered between Mys Seneka and Mys Vrangelya (54°17'N., 138°40'E.), about 33 miles E. Zaliv

Akademii consists of the outer part, with Zaliv Konstantina, a rounded shallow bay on its W side, and Zaliv Nikolaya, entered on the E side, and Ul'banskiy Zaliv, which forms the inner part of the bay.

Mys Seneka was previously described with Tugurskiy Zaliv. An extensive whirlpool exists about 7 miles SE of Mys Seneka.

Poluostrov Vrangelya, on the E side of Zaliv Akademii, terminates in Mys Mukhtelya and Mys Vrangelya, respectively, its N and W extremities, separated from each other by a narrow inlet. The peninsula is formed by the spurs of Gora Mukhtelya, a conspicuous mountain with a pointed summit, about 3 miles SSE of Mys Mukhtelya. Depths of 28 to 37m lie a distance of 0.5 mile offshore on all sides of Poluostrov Vrangelya, which is steep-to and clear of dangers.

Tides—Currents.—Tidal currents attain a velocity of 2 to 3 knots in the vicinity of the peninsula and form eddies and tide rips discernible from seaward.

Mys Mukhtelya (54°18'N., 138°43'E.) faces the sea with white cliffs of moderate height. A conspicuous cape, about 1.5 miles WSW of Mys Mukhtelya and N of the narrow inlet, has a steep, smoothly polished face slanting into the sea.

Mys Vrangelya, the E entrance point of Zaliv Akademii, lies about 3 miles WSW of Mys Mukhtelya, and is a spur of Gora Mukhtelya. The light gray color near the extremity of Mys Vrangelya renders it conspicuous on the darker background of the coast.

The W shore between Mys Seneka and Zaliv Konstantina, about 17 miles SW, is high and rocky. There are no dangers, and deep water lies close to the shore.

The E shore between Mys Vrangelya and Mys Lamsdorfa, about 14 miles S, is high and cliffy in its N part, partly cliffy and precipitous in its middle part, and decreasing in height markedly. There are reddish-brown cliffs, about 30m high near Mys Lamsdorfa. This coast is free of dangers, except for a reef extending a short distance from the coast 5.5 miles N of Mys Lamsdorfa.

Zaliv Konstantina

6.39 Zaliv Konstantina lies on the W side of Zaliv Akademii. The bay, entered between **Mys Ingakan** (54°05'N., 137°28'E.) and Mys Borikagan, about 3 miles SSW, has low shores, and the greater part of the bay dries. The bay offers excellent protection to vessels not exceeding 5.5m in draft.

Mys Ingakan is the S extremity of a narrow peninsula. A hill, sloping steeply seaward, rises to a height of 213m about 0.5 mile NE of Mys Ingakan, and is conspicuous from seaward. A narrow sandy spit, about 3 to 6.1m high, extends 1.8 miles WSW from Mys Ingakan.

Mys Borikagan rises steeply to a fairly conspicuous, round, thickly wooded hill, 137m high. A narrow, sandy spit, about 3 to 6.1m high, extends 1.5 miles NNW from a position about 1.5 miles W of Mys Borikagan.

Tides—Currents.—The MHW interval in Zaliv Konstantina is 2 hours 55 minutes. The tides are semidiurnal. At springs, the maximum tidal rise is 3.6m. At neaps, the HHW rise is 3m, while the LHW rise is 1.5m. The tidal currents at the entrance into the bay attain a maximum velocity of 2 to 2.5 knots at springs, but are less within the entrance.

The flood current sets in a NE direction, while the ebb current sets in a SSW direction.

Depths—Limitations.—Depths of less than 5.5m extend as far as 0.6 mile seaward of the N spit. A drying patch and a 5.5m depth lie about 0.4 mile SSE and 0.4 mile SSW, respectively, of the extremity of the N spit. The drying patch and the extremity of the N spit are comparatively steep-to. Depths of less than 5.5m extend about 0.8 mile seaward of the S spit.

The fairway between the two spits has a width of 0.5 mile, with depths of 7.3 to 9.1m between the detached depth off the extremity of the N spit and the shoal water extending off the S spit.

A confined area, with depths of 6.4 to 7.3m and fringed by drying flats, lies between lines extending about 1 mile NNW of the extremity of the N spit, and a point about 0.6 mile WSW of the spit, respectively.

Anchorage.—Anchorage can be taken in depths of about 8m, sand and mud, W of the SW end of the spit on the N side of the entrance to the bay, with Mys Borikagan bearing 150° and the SW end of the N spit bearing 090°.

Small vessels can obtain anchorage in depths of 6.1 to 6.3m, sand and mud, about 0.3 mile NNW of the extremity of the N spit.

Directions.—When entering Zaliv Konstantina, a vessel should pass Mys Borikagan at a distance of 0.7 mile and then steer NW between the two spits.

Ul'banskiy Zaliv

6.40 Ul'banskiy Zaliv, forming the head of Zaliv Akademii, is entered between **Mys Ukurunru** (53°58'N., 137°51'E.) and Mys Tukurgu, about 27 miles E. Ul'banskiy Zaliv has generally high and rocky shores, except for its head, which is formed by a shoal recess. The bay is exposed to NE winds, and does not offer any safe anchorage.

Mys Ukurunru, the NE extremity of a narrow elevated projection, faces the sea with grayish-brown sheer cliffs. A pointed peak, 357m high, and Gora Glavnaya, a conspicuous mountain, 826m high, rise about 1.7 miles and 3 miles SW, respectively, of the extremity of the cape. Gora Glavnaya dominates conspicuously all nearby summits and forms an excellent landmark.

A barren pillar rock lies a short distance E of the extremity of the cape. There are depths of 24 to 27m, rock, about 0.5 mile off the cape, which has no off-lying dangers. Eddies and tide rips form off the point.

Mys Zarzhetskogo, on the W side of the bay, about 15 miles SW of Mys Ukurunru, is rendered fairly conspicuous on the background of the low sandy shore of a bight immediately S of the cape.

Kosa Betti, a narrow spit of sand and shingle extending from the shore about 7 miles farther SSW, separates the bay proper from the shoal recess at its head.

Mys Obryvistyy, a fairly conspicuous cape on the E side of the bay, about 14 miles SSW of **Mys Gaurovitsa** (53°55'N., 138°21'E.), is bordered NE by a low, sandy stretch, 2.5 miles in length and marked at its S end by an abrupt rise in height to 91m near the extremity of Mys Obryvistyy.

A hill, 174m high, lies close to the shore, about 22 miles WSW of Mys Obryvistyy. The low sandy shore at the head of the bay extends W of the hill.

Ice.—Ice usually disappears in middle or late June, but in unfavorable years, especially at the entrance to the bay, ice may render navigation impracticable before the middle of August.

Tides—Currents.—The tides in Zaliv Ul'banskiy are semidiurnal. At springs, the maximum tidal rise is 4.9m in the N part of the bay and 5.4m in the S part. At neaps, the HHW rise is about 3m and the LHW rise is about 1.8m.

The tidal currents attain a velocity of 1.5 to 2 knots in the N half, and 1 to 1.5 knots in the S half of the bay. The flood current sets in a general SW direction, and the ebb current in a reverse direction.

Zaliv Nikolaya

6.41 Zaliv Nikolaya, entered between **Mys Lamsdorfa** (54°03'N., 138°40'E.) and **Mys Tukurgu**, about 5 miles SSW, offers sheltered anchorage for large vessels, but with poor holding ground.

Mys Lamsdorfa, high and wooded, is almost steep-to on its W side, but depths of 5.5m lie about 0.5 mile S of the cape.

Mys Tukurgu (54°00'N., 138°35'E.) rises to a height of 183m close within the cape, and a reef extends 0.3 mile from the extremity of the cape having a depth of less than 2m. A detached patch, with a least depth of 6.8m and surrounded by depths of about 13m, lies 1.5 miles ENE of **Mys Tukurgu**.

Mys Grotte lies 2.2 miles S of **Mys Tukurgu**, the N point of **Poluostrov Tokhareu**. A sandy islet lies on a sandbank extending 1.3 miles SSE from **Mys Grotte**. **Kosa Nerpich'ya**, a sandy spit, lies with its S extremity 8.5 miles S of the islet.

Mys Nablyudeni, a cliffy cape, about 14 miles SSW of the extremity of **Kosa Nerpich'ya**, rises to a hill, 183m high, within the cape. A yellow bluff, of moderate height, lies about 6.5 miles NNE of **Mys Nablyudeni**. The shores N and S of the bluff are low and consist of sand and shingle.

Mys Nizkiy, about 9 miles S of **Mys Lamsdorfa**, is low and inconspicuous. **Gora Chernaya**, about 3 miles SE of **Mys Nizkiy**, is prominent due to its twin peaks and dark color, and is usually visible to a vessel off the entrance to the bay.

Mys Primetnyy (53°35'N., 138°31'E.), about 21 miles SSW of **Mys Nizkiy**, is a conspicuously high cape, contrasting with the long stretch of the low, sandy, intervening shore. The head of the bay, SW of **Mys Primetnyy**, is fringed by drying flats.

Winds—Weather.—Southeaster winds prevail here during the summer, but alternating SW and NE winds prevail during the late summer and autumn. Blizzards begin to occur as early as the first part of October.

Zaliv Nikolaya is sheltered from fog, which occurs rather rarely within the bay.

Ice.—Ordinarily Zaliv Nikolaya is icebound by early November. The ice begins to break in May, and the bay is clear of ice by the middle of June.

Tides—Currents.—The MHW interval in Zaliv Nikolaya is 4 hours 50 minutes. The tides are semidiurnal. At springs, the maximum tidal rise is 5.4m. At neaps, the HHW rise is 3m, while the LHW rise is 2.4m.

Tidal currents in the entrance to the gulf set NNW and SSE, attaining a rate of 4 knots. Inside the gulf they have rates of 1 to 2.5 knots.

Depths—Limitations.—The depths in the middle of the entrance to Zaliv Nikolaya are 13 to 14.5m. A channel, with prevailing depths of 13 to 14.5m, extends along the inlet for nearly 23 miles within the entrance. As a rule, this channel favors the E side of the inlet, except immediately within the entrance, where depths of 10m extend 3 miles SW from the entrance of the drying lagoon, which extends N of the bay. An 8.2m depth lies 2 miles S of **Mys Lamsdorfa**.

The E side of the recess N of **Mys Nizkiy** is comparatively steep-to, with depths of 7.3m about 0.5 mile offshore.

Shoal water with depths of less than 10m, extends up to 1 mile offshore between **Mys Tukurgu** and the sand islet, about 3.5 miles SSE. A drying flat, its seaward side steep-to, extends 0.5 mile E and SE of the islet.

A 1.8m patch, about 1.7 miles SSE of the islet, is bordered by depths of less than 10m extending about 1 mile E, which narrows the channel to a width of 1.5 miles for a reach of 1.5 miles immediately N of **Mys Nizkiy**, which is steep-to.

The E side of the bay, for about 13 miles S of **Mys Nizkiy**, is comparatively steep-to, with the 10m curve about 0.3 to 0.5 mile offshore.

On the W side of the bay the 10m curve lies about 0.5 mile offshore for a distance of 6 miles N of the extremity of **Kosa Nerpich'ya**, then the 10m curve lies about 1 mile E of the extremity of **Kosa Nerpich'ya**, and extends to 3 miles offshore in the vicinity of the sand bluff, about 7.5 miles SW.

A detached 3.6m shoal, position doubtful, lies 4 miles ESE of the sand bluff.

Anchorage.—The bottom throughout Zaliv Nikolaya is shingle and the holding ground is not good. Vessels are advised not to anchor in the vicinity of **Mys Grotte** because of shoal water and uneven depths. It is also somewhat exposed here. The best anchorage is in depths of 9 to 14m, S and SE of **Kosa Nerpich'ya**. Local knowledge is necessary.

Caution.—During foggy weather a vessel headed for Zaliv Nikolaya should make a landfall somewhere between **Mys Vrangelya** and **Mys Lamsdorfa**. The fog, as a rule, is considerably less along this section of the coast.

Ostrov Men'shikova and Zaliv Aleksandry

6.42 Ostrov Men'shikova (54°35'N., 139°15'E.) is a barren, steep-to island, with depths of 50m close offshore. The island rises to its summit in the SW part of the island. Close off the NE end of the island are three pillar rocks. The N rock lies on a rocky above-water base.

Tides—Currents.—Tidal currents in the vicinity of Ostrov Men'shikova form numerous eddies, especially noticeable on the leeward side of the island. The flood current sets W and the ebb E at a velocity of 2 and 2.5 knots, respectively.

Caution.—Ostrov Men'shikova has been reported to lie 4 miles SSW of its charted position.

Zaliv Aleksandry (54°10'N., 139°10'E.), a totally open bight, is entered between **Mys Mukhtelya**, previously described, and **Mys Aleksandra**, about 36 miles E.

Gora Bernardinskiy (54°08'N., 139°15'E.), about 2 miles inland and midway along the bight, is conical and forms a good landmark.

The W half of the bight is steep-to, with depths of 15 to 18m about 0.7 mile offshore, and has a low shore of sand and shingle contrasting with the elevated shore of the E half. A dense forest, skirted by a strip of grassy land on its seaward side, backs the W half of the bight. Ozero Mukhtelya is

separated from the sea by a sand and shingle spit. It is a triangular shaped lake.

The E half of the bight faces the sea with high precipices, backed by mountains. The slopes of the mountains are covered with shrub, and with forest further inland. This shore, except for some scattered rocks close offshore, is steep-to.

Mys Aleksandra (54°17'N., 139°48'E.), the E entrance point of Zaliv Aleksandry, is also the W entrance point of Sakhalinskiy Zaliv and is described in Sector 7.